



ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[EPA-HQ-OAR-2020-0505, EPA-HQ-OAR-2020-0532; FRL-7523-03-OAR]

RIN 2060-AU66

National Emission Standards for Hazardous Air Pollutants: Carbon Black Production and Cyanide Chemicals Manufacturing Residual Risk and Technology Reviews, and Carbon Black Production Area Source Technology Review

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This action finalizes the residual risk and technology reviews (RTR) conducted for the Carbon Black Production and Cyanide Chemicals Manufacturing major source categories, and the technology review conducted for Carbon Black Production area sources, regulated under National Emission Standards for Hazardous Air Pollutants (NESHAP). In addition, we are taking final action to add new emissions standards for the Carbon Black Production and Cyanide Chemicals Manufacturing major source categories to address hazardous air pollutant (HAP) emissions not previously covered by these NESHAP. The EPA is also finalizing amendments for both source categories that address the startup, shutdown, and malfunction (SSM) provisions of the existing standards, and require electronic reporting of certain notifications, performance test results, and semiannual reports.

DATES: These final rules are effective on **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. The incorporation by reference (IBR) of certain publications listed in the final rule is approved by the Director of the Federal Register as of **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

ADDRESSES: The U.S. Environmental Protection Agency (EPA) has established a docket for the Carbon Black Production source category under Docket ID No. EPA-HQ-OAR-2020-0505,

and a docket for the Cyanide Chemicals Manufacturing source category under Docket ID EPA-HQ-OAR-2020-0532. All documents in the docket are listed on the <https://www.regulations.gov/> website. Although listed, some information is not publicly available, e.g., Confidential Business Information or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically through <https://www.regulations.gov/>, or in hard copy at the EPA Docket Center, WJC West Building, Room Number 3334, 1301 Constitution Ave., NW, Washington, DC. The Public Reading Room hours of operation are 8:30 a.m. to 4:30 p.m. Eastern Standard Time (EST), Monday through Friday. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the EPA Docket Center is (202) 566-1742. Hand Deliveries and couriers may be received by scheduled appointment only. For further information and updates on EPA Docket Center services and the current status, please visit us online at <https://www.epa.gov/dockets>.

FOR FURTHER INFORMATION CONTACT: For questions about the Carbon Black Production source category final action, contact Korbin Smith, Sector Policies and Programs Division (D243-04), Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711; telephone number: (919) 541-2416; fax number: (919) 541-4991; and email address: smith.korbin@epa.gov. For questions about the Cyanide Chemicals Manufacturing source category final action, contact Nathan Topham, Sector Policies and Programs Division (D243-02), Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711; telephone number: (919) 541-0483; fax number: (919) 541-4991; and email address: topham.nathan@epa.gov.

For specific information regarding the risk modeling methodology for both Carbon Black Production and Cyanide Chemicals Manufacturing, contact James Hirtz, Health and

Environmental Impacts Division (C539-02), Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711; telephone number: (919) 541-0881; fax number: (919) 541-0840; and email address: hirtz.james@epa.gov.

SUPPLEMENTARY INFORMATION:

Preamble acronyms and abbreviations. We use multiple acronyms and terms in this preamble. While this list may not be exhaustive, to ease the reading of this preamble and for reference purposes, the EPA defines the following terms and acronyms here:

CAA	Clean Air Act
CCD	combustion control device
CCMPU	cyanide chemicals manufacturing process unit
CDX	Central Data Exchange
CEDRI	Compliance and Emissions Data Reporting Interface
CFR	Code of Federal Regulations
CO	carbon monoxide
CRA	Congressional Review Act
EAV	equivalent annual value
EPA	U.S. Environmental Protection Agency
GMACT	Generic Maximum Achievable Control Technology
HAP	hazardous air pollutant(s)
HCN	hydrogen cyanide
HON	Hazardous Organic NESHAP
HQ	hazard quotient
ICBA	International Carbon Black Association
ICR	Information Collection Request
LEL	lower explosive limit
MACT	maximum achievable control technology
MUF	main unit filter
NAICS	North American Industry Classification System
NATA	National Air Toxics Assessment
NESHAP	national emission standards for hazardous air pollutants
NOCS	Notification of Compliance Status
NSPS	New Source Performance Standards
OAQPS	Office of Air Quality Planning and Standards
OMB	Office of Management and Budget
PEL	permissible exposure limit
ppm	parts per million
ppmv	parts per million by volume
ppmw	parts per million by weight
PRA	Paperwork Reduction Act
PV	present value
REL	reference exposure level
RFA	Regulatory Flexibility Act
RTR	residual risk and technology review
SSM	startup, shutdown, and malfunction
SSP	startup and shutdown plan

STEL	short term exposure limit
TOSHI	target organ-specific hazard index
tpy	tons per year

Background information. On January 14, 2021, the EPA proposed revisions to the Carbon Black Production NESHAP based on our RTR, and proposed no revisions to the Carbon Black Production area source rule based on our technology review. On January 15, 2021, the EPA proposed revisions to the Cyanide Chemicals Manufacturing NESHAP based on our RTR. In this action, we are finalizing decisions for, and revisions of, the NESHAP for these source categories. We summarize some of the more significant comments we timely received regarding the proposed rules and provide our responses in this preamble. A summary of all other public comments on these proposals and the EPA's responses to those comments are available in the *Summary of Comments and EPA's Responses on the National Emission Standards for Hazardous Air Pollutants Carbon Black Production Residual Risk and Technology Review and Carbon Black Production Area Sources Technology Review Proposed Rule* (see Docket ID No. EPA-HQ-OAR-2020-0505) for the Carbon Black Production source category, and *Summary of Comments and EPA's Responses on the National Emission Standards for Hazardous Air Pollutants: Cyanide Chemicals Manufacturing Residual Risk and Technology Review Proposed Rule* (see Docket ID No. EPA-HQ-OAR-2020-0532) for the Cyanide Chemicals Manufacturing source category. "Track changes" versions of the regulatory language that incorporates the changes in this action are available in the dockets.

Organization of this document. The information in this preamble is organized as follows:

I. General Information

- A. Does this action apply to me?
- B. Where can I get a copy of this document and other related information?
- C. Judicial Review and Administrative Reconsideration

II. Background

- A. What is the statutory authority for this action?
- B. What are the source categories and how do the current NESHAP regulate HAP emissions from the source categories?
- C. What changes did we propose for the Carbon Black Production source category in our January 14, 2021, RTR proposal?

D. What changes did we propose for the Cyanide Chemicals Manufacturing source category in our January 15, 2021, RTR proposal?

III. What is included in these final rules?

A. What are the final rule amendments based on the risk reviews for the Carbon Black Production and Cyanide Chemicals Manufacturing source categories?

B. What are the final rule amendments based on the technology reviews for the Carbon Black Production and Cyanide Chemicals Manufacturing source categories?

C. What are the final rule amendments pursuant to CAA sections 112(d)(2) and (3) for the Carbon Black Production and Cyanide Chemicals Manufacturing source categories?

D. What are the final rule amendments addressing emissions during periods of SSM for the Carbon Black Production and Cyanide Chemicals Manufacturing source categories?

E. What other changes have been made to the NESHAP?

F. What are the effective and compliance dates of the standards?

IV. What is the rationale for our final decisions and amendments for the Carbon Black Production source category?

A. Residual Risk Review for the Carbon Black Production Source Category

B. Technology Review for the Carbon Black Production Source Category

C. What are the final rule amendments pursuant to 112(d)(2) and (3) for the Carbon Black Production source category?

D. Amendments Addressing Emissions During Periods of SSM for the Carbon Black Production Source Category

E. Other Technical Amendments to the Carbon Black Production NESHAP

V. What is the rationale for our final decisions and amendments for the Cyanide Chemicals Manufacturing source category?

A. Residual Risk Review for the Cyanide Chemicals Manufacturing Source Category

B. Technology Review for the Cyanide Chemicals Manufacturing Source Category

C. Amendments Addressing Emissions During Periods of SSM for the Cyanide Chemicals Manufacturing Source Category

D. Other Technical Amendments to the Cyanide Chemicals Manufacturing NESHAP

VI. Summary of Cost, Environmental, and Economic Impacts and Additional Analyses Conducted

A. Carbon Black Production

B. Cyanide Chemicals Manufacturing

VII. Statutory and Executive Order Reviews

A. Executive Orders 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

B. Paperwork Reduction Act (PRA)

C. Regulatory Flexibility Act (RFA)

D. Unfunded Mandates Reform Act (UMRA)

E. Executive Order 13132: Federalism

F. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments

G. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks

H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

I. National Technology Transfer and Advancement Act (NTTAA)

J. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

K. Congressional Review Act (CRA)

I. General Information

A. Does this action apply to me?

Regulated entities. The source categories that are the subject of this final action are cyanide chemicals manufacturing and carbon black production major sources regulated under 40 CFR part 63, subpart YY and carbon black production area sources regulated under 40 CFR part 63, subpart M. The North American Industry Classification System (NAICS) codes for the cyanide chemicals manufacturing industry are 325188 and 325199. The NAICS code for the carbon black production industry is 325182.

This list of categories and NAICS codes is not intended to be exhaustive, but rather to provide a guide for readers regarding entities likely to be affected by the final action for the source categories listed. To determine whether your facility is affected, you should examine the applicability criteria in the appropriate NESHAP. If you have any questions regarding the applicability of any aspect of these NESHAP, please contact the appropriate person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section of this preamble.

B. Where can I get a copy of this document and other related information?

In addition to being available in the dockets for these source categories, an electronic copy of this final action will also be available on the Internet. Following signature by the EPA Administrator, the EPA will post a copy of this final action at <https://www.epa.gov/stationary-sources-air-pollution/acetal-resins-acrylic-modacrylic-fibers-carbon-black-hydrogen>. Following publication in the *Federal Register*, the EPA will post the *Federal Register* version of the final rule and key technical documents at this same website.

Additional information is available on the RTR website at <https://www3.epa.gov/ttn/atw/rrisk/rtrpg.html>. This information includes an overview of the RTR program, links to project websites for the RTR source categories, and detailed emissions and other data we used as inputs to the risk assessments.

C. Judicial Review and Administrative Reconsideration

Under Clean Air Act (CAA) section 307(b)(1), judicial review of this final action is available only by filing a petition for review in the United States Court of Appeals for the District of Columbia Circuit (the Court) by **[INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. Under CAA section 307(b)(2), the requirements established by these final rules may not be challenged separately in any civil or criminal proceedings brought by the EPA to enforce the requirements.

Section 307(d)(7)(B) of the CAA further provides that only an objection to a rule or procedure which was raised with reasonable specificity during the period for public comment (including any public hearing) may be raised during judicial review. This section also provides a mechanism for the EPA to reconsider the rule if the person raising an objection can demonstrate to the Administrator that it was impracticable to raise such objection within the period for public comment or if the grounds for such objection arose after the period for public comment (but within the time specified for judicial review) and if such objection is of central relevance to the outcome of the rule. Any person seeking to make such a demonstration should submit a Petition for Reconsideration to the Office of the Administrator, U.S. EPA, Room 3000, WJC South Building, 1200 Pennsylvania Ave. NW, Washington, DC 20460, with a copy to both the person(s) listed in the preceding **FOR FURTHER INFORMATION CONTACT** section, and the Associate General Counsel for the Air and Radiation Law Office, Office of General Counsel (Mail Code 2344A), U.S. EPA, 1200 Pennsylvania Ave. NW, Washington, DC 20460.

II. Background

A. What is the statutory authority for this action?

Section 112 of the CAA establishes a two-stage regulatory process to address emissions of HAP from stationary sources. In the first stage, we must identify categories of sources emitting one or more of the HAP listed in CAA section 112(b) and then promulgate technology-based NESHAP for those sources. “Major sources” are those that emit, or have the potential to emit, any single HAP at a rate of 10 tons per year (tpy) or more, or 25 tpy or more of any

combination of HAP. For major sources, these standards are commonly referred to as maximum achievable control technology (MACT) standards and must reflect the maximum degree of emission reductions of HAP achievable (after considering cost, energy requirements, and non-air quality health and environmental impacts). In developing MACT standards, CAA section 112(d)(2) directs the EPA to consider the application of measures, processes, methods, systems, or techniques, including, but not limited to, those that reduce the volume of or eliminate HAP emissions through process changes, substitution of materials, or other modifications; enclose systems or processes to eliminate emissions; collect, capture, or treat HAP when released from a process, stack, storage, or fugitive emissions point; are design, equipment, work practice, or operational standards; or any combination of the above.

For these MACT standards, the statute specifies certain minimum stringency requirements, which are referred to as MACT floor requirements, and which may not be based on cost considerations. See CAA section 112(d)(3). For new sources, the MACT floor cannot be less stringent than the emission control achieved in practice by the best-controlled similar source. The MACT standards for existing sources can be less stringent than floors for new sources, but they cannot be less stringent than the average emission limitation achieved by the best-performing 12 percent of existing sources in the category or subcategory (or the best-performing five sources for categories or subcategories with fewer than 30 sources). In developing MACT standards, we must also consider control options that are more stringent than the floor under CAA section 112(d)(2). We may establish standards more stringent than the floor, based on the consideration of the cost of achieving the emissions reductions, any non-air quality health and environmental impacts, and energy requirements.

In the second stage of the regulatory process, the CAA requires the EPA to undertake two different analyses, which we refer to as the technology review and the residual risk review. Under the technology review, we must review the technology-based standards and revise them “as necessary (taking into account developments in practices, processes, and control

technologies)” no less frequently than every 8 years, pursuant to CAA section 112(d)(6). The EPA is required to address regulatory gaps, such as missing standards for listed air toxics known to be emitted from the source category. *Louisiana Environmental Action Network (LEAN) v. EPA*, 955 F.3d 1088 (D.C. Cir. 2020). Under the residual risk review, we must evaluate the risk to public health remaining after application of the technology-based standards and revise the standards, if necessary, to provide an ample margin of safety to protect public health or to prevent, taking into consideration costs, energy, safety, and other relevant factors, an adverse environmental effect. The residual risk review is required within 8 years after promulgation of the technology-based standards, pursuant to CAA section 112(f). In conducting the residual risk review, if the EPA determines that the current standards provide an ample margin of safety to protect public health, it is not necessary to revise the MACT standards pursuant to CAA section 112(f).¹ For more information on the statutory authority for this action, see 86 FR 3054, for the Carbon Black Production NESHAP and 86 FR 3906, for the Cyanide Chemicals Manufacturing NESHAP.

B. What are the source categories and how do the current NESHAP regulate HAP emissions from the source categories?

The MACT standards for both the Carbon Black Production and Cyanide Chemicals Manufacturing source categories are contained in the Generic Maximum Achievable Control Technology (GMACT) NESHAP, which also includes MACT standards for several other source categories. Section II.B.1 of this preamble discusses the current Carbon Black Production major and area source rules and section II.B.2 discusses the Cyanide Chemicals Manufacturing source category standards.

1. Carbon Black Production

¹ The Court has affirmed this approach of implementing CAA section 112(f)(2)(A): *NRDC v. EPA*, 529 F.3d 1077, 1083 (DC Cir. 2008) (“If EPA determines that the existing technology-based standards provide an ‘ample margin of safety,’ then the Agency is free to readopt those standards during the residual risk rulemaking.”).

The EPA promulgated the Carbon Black Production NESHAP for major sources on July 12, 2002 (67 FR 46258). The major source standards are codified at 40 CFR part 63, subpart YY. Additionally, the Carbon Black Production area source NESHAP was promulgated on July 16, 2007 (72 FR 38864). The area source standards are codified at 40 CFR part 63, subpart MMMMMM. Subpart MMMMMM was subsequently amended by a direct final rule on March 26, 2008 (73 FR 15923). As promulgated, the Carbon Black Production major source and area source NESHAP apply to carbon black production facilities that are, respectively, major sources and area sources of HAP. The affected source covered by the major and area source subparts is each new, reconstructed, or existing facility that produces carbon black by either the furnace, thermal, acetylene decomposition, or lampblack processes. The source category covered by this MACT standard currently includes 15 major source facilities; no area source facilities were identified.

Emissions limits in the 2002 major source NESHAP for the Carbon Black Production source category were set for process vents associated with the main unit filter (MUF). Process vents at the MUF that have a HAP concentration of equal to or greater than 260 parts per million by volume (ppmv) are required to reduce emissions of HAP by the use of a flare meeting the requirements of 40 CFR part 63, subpart SS, or reduce emissions of total HAP by 98 weight-percent or to a concentration of 20 ppmv, whichever is less stringent. The Carbon Black Production area source NESHAP requires area source facilities to meet the requirements of the Carbon Black Production major source NESHAP found at 40 CFR 63.1103(f) of subpart YY.

2. Cyanide Chemicals Manufacturing

The EPA promulgated the Cyanide Chemicals Manufacturing NESHAP on July 12, 2002 (67 FR 46258). The standards are codified at 40 CFR part 63, subpart YY. The cyanide chemicals manufacturing industry consists of facilities producing hydrogen cyanide or sodium cyanide. The source category covered by this MACT standard currently includes 13 facilities. As promulgated in 2002, the cyanide chemicals manufacturing standards regulate HAP emissions

from cyanide chemicals manufacturing units located at major sources. The HAP emitted from the source category include cyanide compounds (hydrogen cyanide and sodium cyanide), acetonitrile, and acrylonitrile.

The NESHAP defines the affected source as each cyanide chemicals manufacturing process unit (CCMPU). The rule states that the CCMPU is the equipment assembled and connected by hard-piping or duct work to process raw materials to manufacture, store, and transport a cyanide chemicals product. Section II.B of the proposed cyanide chemicals manufacturing RTR provides more information about the source category (86 FR 3906, 3910).

The 2002 NESHAP established emissions standards for process vents, storage vessels, transfer racks, equipment leaks, and some wastewater sources. Cyanide process vents are subject to either a 98 weight-percent reduction of total HAP² performance standard or a 20 ppmv total HAP outlet exit concentration limit. For storage vessels in the Cyanide Chemicals Manufacturing source category, sources may either choose to comply with a 98 weight-percent reduction of hydrogen cyanide performance standard, a 20 ppmv hydrogen cyanide exit outlet concentration limit, or equipment standards (*e.g.*, use of a flare). Transfer racks are subject to either equipment standards or the same performance standard or concentration limit³ as cyanide process vents. Equipment leaks are subject to work practice standards required by either 40 CFR part 63, subpart TT or subpart UU.

During development of the initial MACT standards, we identified process wastewater at existing sources as a potential source of emissions of hydrogen cyanide, acetonitrile, and acrylonitrile. See 65 FR 76408, 76411, and 76413, December 6, 2000, for a discussion of the HAP emitted from cyanide chemicals manufacturing. The 2002 NESHAP established

² “Dry end” process vents at sodium cyanide units must meet a 98 percent reduction performance standard for emissions of sodium cyanide since this is the form of cyanide compounds emitted from these emission points. The HAP emitted from other process vents that make up the “total HAP” emitted from these sources are hydrogen cyanide, acetonitrile, and acrylonitrile.

³ Transfer racks emissions limits are expressed in terms of hydrogen cyanide as this is the only HAP emitted from these sources.

requirements that HAP emissions from applicable process wastewater streams be controlled while the wastewater is being conveyed to treatment and specified requirements for the controls to reduce the hydrogen cyanide and acetonitrile concentration in the process wastewater. For a new CCMPU that generates process wastewater, the NESHAP requires a combined 93 weight-percent removal and control of HAP from process wastewater generated from hydrogen cyanide purification, ammonia purification, or flare blowdown. At the time the initial MACT standards were developed, we identified measures undertaken at cyanide chemicals manufacturing facilities to comply with other NESHAP as the “MACT floor” for process wastewater at existing sources, but we did not include these measures in subpart YY for existing CCMPUs. For a cyanide chemicals manufacturing process unit that generates maintenance wastewater, the NESHAP requires that an owner or operator comply with Hazardous Organic NESHAP (HON) maintenance wastewater requirements.

C. What changes did we propose for the Carbon Black Production source category in our January 14, 2021, RTR proposal?

On January 14, 2021, the EPA published a proposed rule in the *Federal Register* for the Carbon Black Production NESHAP, 40 CFR part 63, subpart YY, that took into consideration the RTR analyses. In the proposed rule, we proposed to find that the risk from the source category is acceptable, the current standards provide an ample margin of safety to protect public health, and more stringent standards are not necessary to prevent an adverse environmental effect. Based on the technology review, we proposed that it is not necessary to revise the existing standards because we did not identify developments in practices, processes, or control technologies that would result in cost-effective emission reductions for the Carbon Black Production source category.

The EPA did, however, propose to broaden the scope of the original NESHAP, which applied to process vents associated with the MUF only, to include previously unregulated process vents associated with the carbon black production unit. The EPA proposed to require all

process vents that have a HAP concentration of the emission stream equal to or greater than 260 ppmv, including those located after the MUF, to reduce emissions of HAP by using a flare meeting the requirements of 40 CFR part 63, subpart SS, or to reduce emissions of total HAP by 98 weight-percent or to a concentration of 20 ppmv, whichever is less stringent. The EPA also proposed to require facilities to conduct performance testing on the additional process vents located after the MUF.

The proposal preamble also stated that the EPA did not identify any currently operating area sources in the carbon black production source category. The EPA is not proposing to change the existing area source standards. However, the area source standard requires all facilities to meet all the requirements in 40 CFR 63.1103(f) of subpart YY (major source standard). The provisions in 40 CFR 63.1103(f) include carbon black production applicability, definitions, and requirements. Therefore, all changes discussed below, which impact the requirements laid out in 40 CFR 63.1103(f), also impact the requirements of the area source rule for carbon black production.

The EPA proposed the following amendments to the Carbon Black Production major source NESHAP:

- Expansion of the process vent emission standards to cover all applicable (based on an applicability threshold) carbon black production process vents;
- A requirement for boilers/process heaters that receive tail gas for use as fuel gas to comply with annual tune-up requirements specified in 40 CFR 63.1103(f)(3)(iii);
- Addition of a work practice standard for periods of startup, as specified in 40 CFR 63.1103(f)(5);
- Revision of the MACT standard compliance provisions for the Carbon Black Production source category to require owners and operators of carbon black production process vent affected sources to conduct periodic performance tests every 5 years;

- Elimination of the startup, shutdown, malfunction (SSM) exemption, which currently appears at 40 CFR 63.1108, and any references to SSM requirements in subpart YY that apply to Carbon Black Production source category affected sources;
- Requirements for submission of electronic copies of required performance test reports, Notification of Compliance Status (NOCS), and periodic reports through the EPA's Central Data Exchange (CDX) using the Compliance and Emissions Data Reporting Interface (CEDRI); and
- Minor editorial and technical changes in the subpart.

D. What changes did we propose for the Cyanide Chemicals Manufacturing source category in our January 15, 2021, RTR proposal?

On January 15, 2021, the EPA published a proposed rule in the *Federal Register* for the Cyanide Chemicals Manufacturing NESHAP (86 FR 3906) that took into consideration the RTR analyses. In the proposed rule, we proposed to find that the risk from the source category is acceptable, the current standards provide an ample margin of safety to protect public health, and more stringent standards are not necessary to prevent an adverse environmental effect. Based on the technology review, we proposed that it is not necessary to revise the existing standards because we did not identify developments in practices, processes, or control technologies that would result in cost-effective emission reductions for the Cyanide Chemicals Manufacturing source category.

However, the EPA proposed standards pursuant to CAA section 112(d)(2) for process wastewater from existing CCMPUs, which was previously unregulated.⁴ We proposed that process wastewater sources at existing sources comply with HON wastewater requirements. Specifically, for an existing cyanide chemicals manufacturing process unit that generates process

⁴ The EPA not only has authority under CAA sections 112(d)(2) and (3) to set MACT standards for previously unregulated HAP emissions at any time but is required to address any previously unregulated HAP emissions as part of its periodic review of MACT standards under CAA section 112(d)(6). *LEAN v. EPA*, 955 F3d at 1091-1099.

wastewater from hydrogen cyanide purification, ammonia purification, or flare blowdown, we proposed that owners or operators comply with the requirements of 40 CFR 63.138(a)(1) of the HON if the total annual average concentration of Table 9 of 40 CFR part 63, subpart G compounds and cyanide compounds⁵ is greater than or equal to 10,000 parts per million by weight (ppmw) at any flow rate, or the total annual average concentration of Table 9 compounds and cyanide compounds is greater than or equal to 1,000 ppmw, and the annual average flow rate is greater than or equal to 10 liters per minute (according to the procedures in 40 CFR 63.144(a)). We also proposed revising the new source standard to add the HON requirements for waste management units upstream of an open or closed biological treatment process to ensure demonstrable compliance measures are in place for these sources.

The EPA also proposed the following amendments:

- Revisions to the MACT rule at 40 CFR 63.1108 through 40 CFR 63.1112 to eliminate references to SSM requirements in subpart YY to reduce confusion that may result from referenced subparts associated with the GMACT that may contain SSM exemptions for other source categories;
- Requirements for submission of electronic copies of required performance test reports, NOCS, and periodic reports through the EPA's CDX using CEDRI; and
- Minor editorial and technical changes in the subpart.

III. What is included in these final rules?

This action finalizes the EPA's determinations pursuant to the RTR provisions of CAA section 112 for the Carbon Black Production and Cyanide Chemicals Manufacturing source categories.

For the Carbon Black Production source category, this action finalizes changes to the major source NESHAP, including elimination of the SSM exemption and any reference to SSM

⁵ In the final rule, we have clarified that this requirement applies to "free cyanide" rather than "cyanide compounds" in response to public comments.

requirements for carbon black production facilities, inclusion of a work practice standard for startup and shutdown periods, inclusion of boiler and process heater annual tune-up requirements, expansion of process vent standard applicability, addition of periodic process vent performance testing requirements, inclusion of electronic reporting requirements, and editorial and technical changes. This final action also reflects several changes to the RTR proposal in consideration of comments received during the public comment period. Section IV presents our rationale for our final decisions and changes to the proposed amendments based on comments received on the proposal.

For the Cyanide Chemicals Manufacturing source category, this action finalizes changes to the NESHAP, including: eliminating any reference to SSM exemptions for cyanide chemicals manufacturing facilities, adding electronic reporting requirements, adding HON requirements for process wastewater from existing cyanide chemical manufacturing process units, adding HON requirements for waste management units upstream of an open or closed biological treatment process to the new source standard, and making editorial/technical changes. This action also reflects several changes to the RTR proposal in consideration of comments received during the public comment period as described in section V of this preamble.

A. What are the final rule amendments based on the risk reviews for the Carbon Black Production and Cyanide Chemicals Manufacturing source categories?

This section introduces the final determinations for the Carbon Black Production and Cyanide Chemicals Manufacturing NESHAP pursuant to CAA section 112(f). Section III.A.1 presents the final decisions based on the risk review for the Carbon Black Production source category. Section III.A.2 presents the final decisions based on the risk review for the Cyanide Chemicals Manufacturing source category.

1. Carbon Black Production

The EPA is not amending the major source Carbon Black Production NESHAP based on the risk reviews conducted pursuant to CAA section 112(f). In this action, we are finalizing our

proposed determination that the risk from HAP emissions from the Carbon Black Production source category is acceptable, and that the standards provide an ample margin of safety to protect public health and prevent an adverse environmental effect.

2. Cyanide Chemicals Manufacturing

The EPA is not amending the Cyanide Chemicals Manufacturing NESHAP based on the risk review conducted pursuant to CAA section 112(f). In this action, we are finalizing our proposed determination that the risk from HAP emissions from the Cyanide Chemicals Manufacturing source category is acceptable, and that the standards provide an ample margin of safety to protect public health and prevent an adverse environmental effect.

B. What are the final rule amendments based on the technology reviews for the Carbon Black Production and Cyanide Chemicals Manufacturing source categories?

This section summarizes the results of the technology reviews for the Carbon Black Production and Cyanide Chemicals Manufacturing NESHAP. Section III.B.1 presents the final decisions based on the technology review for the Carbon Black Production source category. Section III.B.2 presents the final decisions based on the technology review for the Cyanide Chemicals Manufacturing source category.

1. Carbon Black Production

We determined that there are no developments in practices, processes, and control technologies that warrant revisions to the MACT standards for this source category. Therefore, we are not finalizing revisions to the MACT standards for this source category under CAA section 112(d)(6). However, as part of the technology review, we identified regulatory gaps (previously unregulated processes or pollutants), and are establishing new standards to fill those gaps as described in section III.C of this preamble.

As discussed in the Carbon Black Production source category proposal preamble, we also performed a technology review of the Carbon Black Production area source NESHAP. As part of that review, the EPA did not identify any currently operating area source facilities. We are

finalizing our conclusion that it is not necessary to make changes to the existing area source standards as a result of this review.

2. Cyanide Chemicals Manufacturing

We determined that there are no developments in practices, processes, and control technologies that warrant revisions to the MACT standards for this source category. Therefore, we are not finalizing revisions to the MACT standards for this source category under CAA section 112(d)(6). However, as part of the technology review, we identified regulatory gaps (previously unregulated processes or pollutants), and are establishing new standards to fill those gaps as described in section III.C of this preamble.

C. What are the final rule amendments pursuant to CAA sections 112(d)(2) and (3) for the Carbon Black Production and Cyanide Chemicals Manufacturing source categories?

This section describes the final rule amendments to the Carbon Black Production and Cyanide Chemicals Manufacturing NESHAP pursuant to CAA sections 112(d)(2) and (3). Section III.C.1 presents the final rule amendments for the Carbon Black Production source category. Section III.C.2 presents the final rule amendments for the Cyanide Chemicals Manufacturing source category.

1. Carbon Black Production

Pursuant to CAA sections 112(d)(2) and (3), the EPA is finalizing its proposal to broaden the scope of the current emission limits for new and existing sources in the major source NESHAP, which applies to process vents associated with the MUF, to include all process vents associated with the carbon black production unit. This amendment requires all process vents, including those located after the MUF that meet the applicability threshold, to reduce emissions of total HAP by 98 weight-percent or to a concentration of 20 ppmv, whichever is less stringent, by venting emissions through a closed vent system to any combination of control devices meeting the requirements of 40 CFR 63.982(a)(2). Additionally, these final amendments require

facilities to conduct an applicability determination test on the additional process vents located after the MUF.

2. Cyanide Chemicals Manufacturing

Pursuant to CAA sections 112(d)(2) and (3), the EPA is finalizing its proposal to add standards for process wastewater at existing CCMPUs with minor applicability-related clarifications (see section V.D.3.d (Request for Clarification)). The final standards require that individual wastewater streams from CCMPU HCN purification, ammonia purification, or flare blowdown, comply with the requirements of 40 CFR 63.138(a)(1) of the HON if the total annual average concentration of Table 9 of 40 CFR part 63, subpart G compounds and free cyanide from each process wastewater stream is greater than or equal to 10,000 ppmw at any flow rate, or the total annual average concentration of Table 9 compounds and free cyanide from each process wastewater stream is greater than or equal to 1,000 ppmw and the annual average flow rate is greater than or equal to 10 liters per minute (according to the procedures in 40 CFR 63.144(a)). The EPA is also finalizing its proposal to add the HON requirements for waste management units upstream of an open or closed biological treatment process for process wastewater at new sources.

D. What are the final rule amendments addressing emissions during periods of SSM for the Carbon Black Production and Cyanide Chemicals Manufacturing source categories?

This section describes the final rule amendments to the Carbon Black Production and Cyanide Chemicals Manufacturing NESHAP that address emissions during periods of SSM. Section III.D.1 presents the final rule amendments for the Carbon Black Production source category. Section III.D.2 presents the final rule amendments for the Cyanide Chemicals Manufacturing source category.

1. Carbon Black Production

The EPA is finalizing the proposed SSM provision amendments for the Carbon Black Production major source NESHAP in subpart YY in order to ensure consistency with the

decision in *Sierra Club v. EPA*, 551 F. 3d 1019 (DC Cir. 2008). As noted in the proposal for the Carbon Black Production source category, under this decision, the Court vacated two provisions that exempted sources from the requirement to comply with otherwise applicable CAA section 112(d) emission standards during periods of SSM. We proposed and are finalizing revisions to the MACT rule at 40 CFR 63.1108 through 40 CFR 63.1112 that remove the SSM exemption under the Carbon Black Production NESHAP and any references to SSM-related requirements.

The EPA is also finalizing startup and shutdown work practice standards to address safety and combustibility concerns in the absence of the SSM exemption. The work practice standard, as amended under the final rule, is discussed in greater detail in section IV.C of this preamble.

2. Cyanide Chemicals Manufacturing

The EPA is finalizing the proposed SSM provision amendments for the Cyanide Chemicals Manufacturing NESHAP in order to ensure consistency with the decision in *Sierra Club v. EPA*, 551 F. 3d 1019 (DC Cir. 2008). The Cyanide Chemicals Manufacturing NESHAP promulgated in 2002 is consistent with the Court decision mentioned above. However, we proposed and are finalizing revisions to the NESHAP at 40 CFR 63.1108 through 40 CFR 63.1112 to ensure that no confusion results from referenced subparts in subpart YY that may contain SSM exemptions for other source categories. See section V.C of this preamble for more information regarding SSM provisions under subpart YY.

E. What other changes have been made to the NESHAP?

This section describes other amendments to the final Carbon Black Production and Cyanide Chemicals Manufacturing NESHAP. Section III.E.1 presents the other final rule amendments for the Carbon Black Production source category. Section III.E.2 presents the other final rule amendments for the Cyanide Chemicals Manufacturing source category.

1. Carbon Black Production

Other final amendments to the Carbon Black Production NESHAP include boiler and process heater annual tune-up requirements, electronic reporting requirements, and periodic performance testing requirements for process vents to demonstrate initial and continued compliance with the standards, as discussed below.

a. Boiler and Process Heater Annual Tune-Up Provisions

The EPA is finalizing annual tune-up requirements for boilers and process heaters that utilize tail gas for use as fuel. These provisions are specified in 40 CFR 63.1103(f)(3)(iii) of the final rule. To better reflect boilers and process heaters used in the carbon black production source category, the final annual boiler and process heater tune-up requirements were revised from the proposal, based on comments received (see section IV.D of this preamble for detail related to comments received, as well as the EPA's revisions and rationale).

b. Electronic Reporting Requirements

The EPA is finalizing its proposal that owners and operators of carbon black production facilities submit electronic copies of required performance test reports, NOCS, and periodic reports through the EPA's CDX using CEDRI. A description of the electronic data submission process is provided in the memorandum, "*Electronic Reporting Requirements for New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP) Rules*", available in the docket for the Carbon Black Production NESHAP (see Docket ID No. EPA-HQ-OAR-2020-0505-0018).

c. Periodic Performance Testing

The EPA is finalizing rule amendments, as proposed, that require owners and operators of carbon black production process vents subject to the rule, in addition to the already required initial performance test, to conduct performance tests every 5 years to demonstrate continued compliance with the NESHAP.

2. Cyanide Chemicals Manufacturing

The EPA is finalizing its proposal that owners and operators of cyanide chemicals manufacturing facilities submit electronic copies of required performance test reports, NOCS, and periodic reports through the EPA's CDX using CEDRI. A description of the electronic data submission process is provided in the memorandum, *Electronic Reporting Requirements for New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP) Rules*, available in the docket for the Cyanide Chemicals Manufacturing NESHAP action (see Docket ID No. EPA-HQ-OAR-2020-0532-0003). Specific comments received on the proposed periodic report electronic data template and the EPA's response to those comments are provided in a memorandum to the docket, *Summary of Comments and EPA's Responses on the National Emission Standards for Hazardous Air Pollutants: Cyanide Chemicals Manufacturing Residual Risk and Technology Review Proposed Rule*, available in the Cyanide Chemicals Manufacturing NESHAP docket (see EPA HQ-OAR-2020-0532).

F. What are the effective and compliance dates of the standards?

This section describes the effective dates and compliance dates for the final amendments to the Carbon Black Production and Cyanide Chemicals Manufacturing NESHAP. Section III.F.1 presents the effective dates and compliance dates for the Carbon Black Production NESHAP amendments. Section III.F.2 presents the effective dates and compliance dates for the Cyanide Chemicals Manufacturing NESHAP amendments.

1. Carbon Black Production

a. Effective Date of the Final Rule

The revisions to the Carbon Black Production MACT standards being promulgated in this action are effective on **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

b. Compliance Dates

For new sources (affected sources that commenced construction or reconstruction after January 14, 2021), the EPA is finalizing, as proposed, that affected sources must comply with all

of the final rule requirements immediately upon the effective date of the rule, **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, or upon startup, whichever is later.

The EPA is finalizing, as proposed, that existing Carbon Black Production affected sources that commenced construction or reconstruction on or before January 14, 2021 (existing sources), must comply with the following requirements of the rule no later than November 20, 2022: (1) Process vent emission standards applicability testing for carbon black production process vents; (2) the requirement to conduct performance tests no more than 60 months after the preceding test when demonstrating compliance with process vent emission control requirements; and (3) boiler and process heater annual tune-up requirements.

The EPA is finalizing a requirement that previously unregulated process vents from Carbon Black Production sources that commenced construction or reconstruction on or before January 14, 2021, will have until November 19, 2024 to comply with final rule requirements for process vents. This represents a change from the proposal. The EPA determined that changing the proposed compliance period is necessary, in the event that the applicability test indicates that previously unregulated process vents are required to route emissions to an existing control device or to a newly constructed control device. Based on comments received, the EPA believes providing a 3-year compliance period for newly subject process vents, instead of 1 year, is necessary and appropriate in order to ensure sufficient time for facilities to conduct the necessary process design planning, purchases, construction, and changes to come into compliance and then perform the initial performance test.

For requirements related to SSM-related amendments and electronic reporting, the EPA is finalizing, as proposed, that all existing sources must be in compliance with the: (1) SSM-related amendments (changes proposed as a result of removing the SSM exemption from the requirements); (2) the alternative work practice standard specified in 40 CFR 63.1103(f)(5) related to the requirement that a closed vent system route the collected vapors to a control device when demonstrating compliance; and (3) the addition of requirements to submit reports

electronically by **[INSERT DATE 180 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. Based on our assessment for existing sources, 180 days is the most expeditious compliance period practicable for complying with SSM-related and electronic reporting requirements.

The EPA considers 180 days to be sufficient for owners and operators of affected sources to comply with the alternative work practice standard for startup and shutdown.⁶ Many of the work practice standard requirements included in the final rule are already implemented by industry.

Our experience with similar industries that are required to convert reporting mechanisms, to install necessary hardware and software, become familiar with the process of submitting performance test results electronically through the EPA's CEDRI, test these new electronic submission capabilities, and reliably employ electronic reporting, shows that a time period of a minimum of 90 days, and, more typically, 180 days is generally necessary to successfully accomplish these revisions.

Our experience with similar industries further shows that owners and operators generally require a time period of 180 days to read and understand the amended rule requirements; to evaluate their operations to ensure that they can meet the standards during periods of startup and shutdown as defined in the rule and make any necessary adjustments; and to update their operation, maintenance, and monitoring plan to reflect the revised requirements.

2. Cyanide Chemicals Manufacturing

a. Effective Date of the Final Rule

The revisions to the Cyanide Chemicals Manufacturing standards being promulgated in this action are effective on **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

⁶ Section 63.983(a)(1) of 40 CFR part 63, subpart SS requires that each closed vent system be designed and operated to collect the regulated material vapors from the emission point, and to route the collected vapors to a control device, apply at all times.

b. Compliance Dates

New sources (affected sources that commenced construction or reconstruction after January 15, 2021) must comply with all of the standards immediately upon the effective date of the standard, **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, or upon startup, whichever is later.

The compliance date for existing Cyanide Chemicals Manufacturing affected sources (affected sources that commenced construction or reconstruction on or before January 15, 2021) to comply with the final process wastewater standards is November 20, 2022. The EPA determined that affected sources are already complying with similar or substantially equivalent process wastewater requirements. The EPA is allowing one year to comply with the final process wastewater requirements in order to provide owners and operators the time to evaluate process wastewater rule requirements and applicability to their operations, perform compliance calculations, and adjust plans and reports, as necessary.

For requirements related to SSM-related amendments (removing references to SSM-related exemptions in other subparts) and electronic reporting, the compliance date is **[INSERT DATE 180 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. Based on our assessment for existing sources, 180 days is the most expeditious compliance period practicable for complying with SSM-related and electronic reporting requirements.

For SSM-related amendments, our experience with similar industries indicates that regulated facilities generally require a time period of 180 days to read and understand the amended rule requirements; to evaluate their operations to ensure that they can meet the standards during periods of startup and shutdown as defined in the rule and make any necessary adjustments; and to update their operations to reflect the revised requirements.

For electronic reporting changes, our experience with similar industries that are required to convert reporting mechanisms, to install necessary hardware and software, become familiar with the process of submitting performance test results electronically through the EPA's CEDRI,

test these new electronic submission capabilities, and reliably employ electronic reporting indicates that a time period of a minimum of 90 days, and, more typically, 180 days is generally necessary to successfully accomplish these revisions.

IV. What is the rationale for our final decisions and amendments for the Carbon Black Production source category?

For each issue, this section provides a description of what we proposed and what we are finalizing for the issue, the EPA's rationale for the final decisions and amendments, and a summary of key comments and responses. For all comments not discussed in this preamble, comment summaries and the EPA's responses can be found in the comment summary and response document available in the docket for this source category.

A. Residual Risk Review for the Carbon Black Production Source Category

1. What did we propose pursuant to CAA section 112(f) for the Carbon Black Production source category?

On January 14, 2020 (86 FR 3056), the EPA proposed that risk posed by major sources in the Carbon Black Production source category is acceptable, that the current NESHAP provides an ample margin of safety to protect public health, and that additional standards are not necessary to prevent an adverse environmental effect. The estimated cancer risks were below the presumptive limit of acceptability and the noncancer risk results indicate there is minimal likelihood of adverse noncancer health effects due to HAP emissions from this source category. The proposed decision on ample margin of safety was based on weighing factors relevant to this particular source category, including the risk posed by point sources and the costs and cost-effectiveness of additional controls to reduce risk further, as well as uncertainties in the baseline emissions estimates used in estimating risk, the costs and effectiveness of the work practices we considered to reduce these emissions, and the amount of risk reduction that could be achieved with the work practices. The EPA sets standards under CAA section 112(f)(2) using "a two-step standard-setting approach, with an analytical first step to determine an 'acceptable risk' that

considers all health information, including risk estimation uncertainty, and includes a presumptive limit on maximum individual risk (MIR) of approximately 1-in-10 thousand.” (54 FR 38045, September 14, 1989). In the proposal, the EPA estimated risks based on actual and allowable emissions from carbon black production sources, and we considered these in determining acceptability. A more thorough discussion of the risk assessment is included in the *Residual Risk Assessment for the Carbon Black Production Source Category in Support of the Risk and Technology Review 2021 Final Rule document*, available in the docket for this final rule (Docket-EPA-HQ-OAR-2020-0505).

In the proposed rule, as presented in Table 1 below, based on modeling actual emissions from the Carbon Black Production source category for all 15 facilities, we estimated inhalation cancer risk to the individual most exposed was less than 1-in-1 million. The estimated incidence of cancer due to inhalation exposures resulting from emissions from the source category was 0.00004 excess cancer cases per year, or one excess case every 25,000 years with no-one exposed to an excess cancer risk greater than or equal to 1-in-1 million due to inhalation exposure to HAP emissions from this source category. The Agency estimated that the maximum chronic noncancer target organ-specific hazard index (TOSHI) from inhalation exposure from this source category was 0.06. In the screening assessment of worst-case acute inhalation impacts, we estimated a maximum hazard quotient (HQ) of 0.09 (due to hydrogen cyanide) based on the reference exposure level (REL). As shown in Table 1, the chronic cancer and non-cancer risks are the same for allowable and facility-wide emissions as they are for actuals.

Table 1. Inhalation Risk Assessment Summary for Carbon Black Production¹ Source Category

Risk assessment	Number of facilities ²	Maximum individual cancer risk (1-in-1 million) ³	Estimated population at increased risk of cancer	Estimated population at increased risk of cancer	Estimated annual cancer incidence (cases per year)	Maximum chronic noncancer TOSHI ⁴	Maximum screening acute noncancer HQ ⁵
-----------------	-----------------------------------	--	--	--	--	--	---

			≥1-in-1 million	≥10-in-1 million			
Baseline Actual Emissions							
Source Category	15	0.06	0	0	0.00004	<1 (neurologica l)	0.09 (REL)
Facility- wide	15	0.06	0	0	0.00004	<1 (neurologica l)	
Baseline Allowable Emissions							
Source Category	15	0.06	0	0	0.00004	<1 (neurologica l)	

¹ Based on actual and allowable emissions.

² Number of facilities evaluated in the risk assessment. Includes 15 operating facilities subject to 40 CFR part 63, subpart YY.

³ Maximum individual excess lifetime cancer risk due to HAP emissions from the source category.

⁴ Maximum TOSHI. The target organ with the highest TOSHI for the Carbon Black Production source category is the neurological system.

⁵ The maximum estimated acute exposure concentration was divided by available short-term threshold values to develop an array of HQ values. The acute HQ shown was based upon the lowest acute 1-hour dose-response value, the REL for hydrogen cyanide. When an HQ exceeds 1, we also show the HQ using the next lowest available acute dose-response value.

We also conducted a multipathway screening assessment for the source category, and the results of the screening assessment are presented in the risk report titled *Residual Risk Assessment for the Carbon Black Production Source Category in Support of the 2021 Risk and Technology Review Final Rule*, and section IV of the proposal preamble (86 FR 3054), January 14, 2021) available in the docket for this action.

A screening value is not an estimate of the cancer risk or a noncancer HQ (or HI). Rather, a screening value represents a high-end estimate of what the risk or HQ may be. For the Carbon Black Production source category, the highest cancer screening value was from arsenic emissions, with a Tier 2 cancer screening value of 9, and the highest non-cancer screening value was from mercury emissions, with a Tier 3 non-cancer screening value of 2. We are confident that if a refined multipathway risk assessment was conducted, the HQ for mercury would be lower than 2. Further details on the Tier 3 screening assessment can be found in Appendix 11 of the *Residual Risk Assessment for the Carbon Black Production Source Category in Support of*

the Risk and Technology Review 2021 Final Rule. Arsenic emissions resulted in a Tier 2 cancer screening value of 9, which means that we are confident that the multipathway cancer risk is lower than 9-in-1 million. The EPA has determined that it is not necessary to go beyond the Tier 3 assessment for mercury (to a site-specific assessment) or beyond the Tier 2 cancer screening assessment. As explained above, the mercury screening value of 2 is a high-end estimate of what the risk or hazard may be and can be interpreted to mean that we are confident that the HQ would be lower than 2. Similarly, we are confident that the excess cancer risk is less than 9-in-1 million, and evaluation under Tier 3 or a site-specific assessment would further reduce the estimated risk. Further, risk results from five site-specific mercury assessments the EPA has conducted for five RTR source categories resulted in noncancer HQs that range from 50 times to 800 times lower than the respective Tier 2 mercury screening value for those facilities (refer to the identified Docket ID No. EPA-HQ-OAR-2017-0015 for a copy of these reports).⁷ Based on our review of these analyses, we expect if we were to perform a site-specific assessment for the Carbon Black Production source category, the mercury HQ would be at least a one order of magnitude less than the modeled Tier 3 non-cancer screening value of 2 for mercury. Thus, the EPA is confident that the mercury HQ would be less than 1, if further refined to incorporate enhanced site-specific analyses such as improved model boundary identification with improved soil/water run-off calculations and AERMOD deposition outputs used in the TRIM.FaTE model.

In evaluating the potential for multipathway effects from emissions of lead for the Carbon Black Production source category, the EPA compared modeled annual lead

⁷ EPA Docket records: EPA-HQ-OAR-2017-0015, Appendix 11 of the *Residual Risk Assessment for the Taconite Manufacturing Source Category in Support of the Risk and Technology Review 2019 Proposed Rule*, Appendix 11 of the *Residual Risk Assessment for the Integrated Iron and Steel Source Category in Support of the Risk and Technology Review 2019 Proposed Rule*, Appendix 11 of the *Residual Risk Assessment for the Portland Cement Manufacturing Source Category in Support of the 2018 Risk and Technology Review Final Rule*, and Appendix 11 of the *Residual Risk Assessment for the Coal and Oil-Fired EGU Source Category in Support of the 2018 Risk and Technology Review Proposed Rule* and EPA Docket record: EPA-HQ-OAR-2019-0373, Appendix 11 of the *Residual Risk Assessment for the Iron and Steel Foundries Source Category in Support of the Risk and Technology Review 2019 Proposed Rule*.

concentrations to the secondary National Ambient Air Quality Standards (NAAQS) level for lead (0.15 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$), arithmetic mean concentration over a 3-month period). The highest annual average lead concentration, 0.000099 $\mu\text{g}/\text{m}^3$, is far below the NAAQS level for lead, indicating a low potential for multipathway impacts from lead.

In determining whether risk is acceptable for this source category, the EPA considered all available health information and risk estimation uncertainty that includes the uncertainty in the data (See proposal at 86 FR 3054, section III.C.7, *How do we consider uncertainties in risk assessment?*). The maximum cancer risk for all facilities was below 1-in-1 million; in addition, there were no facilities with an estimated maximum chronic noncancer HI or maximum HQ greater than or equal to 1. The EPA weighed all health risk factors in our risk acceptability determination, and we proposed that the risk from this source category is acceptable. We then considered whether the NESHAP provides an ample margin of safety to protect public health, and whether more stringent standards were necessary to prevent an adverse environmental effect, by taking into consideration costs, energy, safety, and other relevant factors. Based upon these considerations, we proposed and are finalizing the determination that the 2002 Carbon Black Production NESHAP requirements provide an ample margin of safety to protect public health. Based on the results of our environmental risk screening assessment, we also proposed and are finalizing the determination that more stringent standards are not necessary to prevent an adverse environmental effect.

2. How did the risk review change for the Carbon Black Production source category?

We did not receive any information that changed our determination concerning risk and we are finalizing our proposed conclusion on the risk review.

3. What key comments did we receive on the risk review, and what are our responses?

We received several comments regarding the proposed risk review and our proposed determination that no revisions to the standard were warranted under CAA section 112(f)(2). One commenter supported the proposed determination, while another, stated that EPA

underestimated risks. After review of these comments, we disagreed with the commenter's assertion that risks were underestimated and determined no changes to the standard were necessary. The comments and our specific responses can be found in the document, *Summary of Comments and EPA's Responses on the National Emission Standards for Hazardous Air Pollutants Carbon Black Production Residual Risk and Technology Review and Carbon Black Production Area Sources Technology Review Proposed Rule*, which is available in docket: EPA-HQ-OAR-2020-0505.

4. What is the rationale for our final approach and final decisions for the risk review?

We evaluated all the comments on the EPA's risk review and determined that no changes are needed. For the reasons explained in the proposed rule, we determined that the risk from the Carbon Black Production source category is acceptable, the current standards provide an ample margin of safety to protect public health, and more stringent standards are not necessary to prevent an adverse environmental effect. Therefore, pursuant to CAA section 112(f)(2), we are finalizing our residual risk determination as proposed.

B. Technology Review for the Carbon Black Production Source Category

1. What did we propose pursuant to CAA section 112(d)(6) for the Carbon Black Production source category?

We proposed a determination that it is not necessary to revise the existing standards because we did not identify developments in practices, processes, or control technologies that would result in cost-effective emission reductions for the Carbon Black Production source category. However, we did identify a potential gap in the regulation, and proposed to broaden the scope of the standards under the CAA sections 112(d)(2) and (3). The final approach related to that issue is discussed in section IV.C of this preamble. Additional information on our technology review can be found in the memorandum, *Technology Review for Carbon Black Production Source Category*, which is available in docket: EPA-HQ-OAR-2020-0505.

We also performed a technology review of the Carbon Black Production area source NESHAP. As part of that review, the EPA did not identify any currently operating sources in the Carbon Black Production area source category, and therefore, we proposed no changes. In this action, we are finalizing our proposed determination. For more information on the review of potential area source facilities see the memorandum, *Identification of Area Sources for the Carbon Black Production NESHAP*, which is available in docket: EPA-HQ-OAR-2020-0505.

2. How did the technology review change for the Carbon Black Production source category?

The technology review did not change from proposal. Therefore, we are finalizing our determination that no revisions to the NESHAP are necessary pursuant to CAA section 112(d)(6) for both the major and area source categories.

3. What key comments did we receive on the technology review, and what are our responses?

We received two comments regarding the major source proposed technology review and our proposed determination that no revisions were warranted under CAA section 112(d)(6). Comments suggested changes to our technology review to include additional technologies mentioned in consent decrees, including incinerators, wet or dry gas scrubbers, and selective catalytic reduction technologies. After review of these comments, we determined that no changes to the standards were necessary. Specifically, we determined that these technologies were not cost-effective for controlling HAP from carbon black facilities. The comments and our specific responses can be found in the document, *Summary of Comments and EPA's Responses on the National Emission Standards for Hazardous Air Pollutants Carbon Black Production Residual Risk and Technology Review and Carbon Black Production Area Sources Technology Review Proposed Rule*, which is available in docket: EPA-HQ-OAR-2020-0505. We did not receive any comments on the area source category proposed technology review.

4. What is the rationale for our final approach and final decisions for the technology review?

Our technology review sought to identify add-on control technology that was not identified during the original NESHAP development and improvements to existing add-on

controls. We also sought to identify new work practices, operational procedures, process changes, pollution prevention alternatives, or techniques that have the potential to reduce emissions. Based on our review, we did not identify any technologies, that would result in cost-effective emission reductions for the Carbon Black Production source category. Since proposal, no information has been presented to cause us to change the proposed determination.

Consequently, we are finalizing our CAA section 112(d)(6) determination as proposed.

C. What are the final rule amendments pursuant to 112(d)(2) and (3) for the Carbon Black Production source category?

1. What did we propose pursuant to CAA sections 112(d)(2) and (3) for the Carbon Black Production source category?

Under CAA sections 112(d)(2) and (3) we proposed to broaden the scope of the existing emission limit in the major source NESHAP, which applies to process vents associated with the MUF, to include all process vents associated with the carbon black production unit. The expansion to cover all process vents under the Carbon Black Production MACT standard is in accordance with *LEAN v. EPA*, 955 F. 3d. 1088 (D.C. Cir. 2020), in which the Court held that the EPA has an obligation to set standards for unregulated pollutants which the EPA is required to regulate as part of technology reviews under CAA section 112(d)(6).

We proposed to require all process vents that have a HAP concentration of the emission stream equal to or greater than 260 ppmv, including those located after the MUF, to reduce emissions of total HAP by 98 weight-percent or to a concentration of 20 ppmv, whichever is less stringent. We also proposed to require applicability testing of process vents located after the MUF and compliance with process vent standards (where applicability threshold was exceeded) within 1 year after the effective date of the final rule.

2. What changed since proposal?

We are finalizing a longer timeframe for previously unregulated process vents to come into compliance with the requirements, since this may require the addition of add-on controls.

The extension changes the proposed compliance date of 1 year from the effective date of the final rule to 3 years from the effective date of the final rule.

3. What are the key comments and responses?

The EPA received comments generally supporting the proposal to broaden the emission limit to apply to all process vents that have a HAP concentration of the emission stream equal to or greater than 260 ppmv, associated with the carbon black production unit. One commenter requested an extension to the compliance date.

a. Compliance date extension

Comment: The commenter stated that they do not believe carbon black facilities will be able to implement the carbon black process vent requirements for any previously unregulated process vents within 1 year of the effective date. In support of their comment, the commenter stated that the EPA has addressed similar situations in final rules by allowing up to 3 years from the effective date of the final rule for facilities to complete any necessary capital projects as allowed for by CAA section 112(i). For a detailed summary of the comment, see the document *Summary of Comments and EPA's Responses on the National Emission Standards for Hazardous Air Pollutants Carbon Black Production Residual Risk and Technology Review and Carbon Black Production Area Sources Technology Review Proposed Rule*, available in the docket for this source category.

Response: The EPA agrees with the commentor that, in the event that the applicability test indicates that any newly identified process vents are subject and require re-routing to an existing control device or the construction of a new control device, the 1-year time period that the EPA proposed to allow for carbon black facilities to bring the process vents into compliance may be insufficient. As noted by the commenter, while the 1-year time frame is sufficient for conducting the applicability test, it may not provide enough time to complete the process of safely designing and constructing the ductwork necessary to either re-route the vent to an existing control device or design and construct ductwork for re-routing the vent and a new

control device. To address this concern, the EPA is extending this time period in the final rule and allowing up to 3 years from the effective date of the final rule for facilities to complete any necessary capital projects as allowed for by CAA section 112(i). The language at 40 CFR 63.1102(e) has been amended in the final rule to reflect this change.

D. Amendments Addressing Emissions During Periods of SSM for the Carbon Black Production Source Category

1. What amendments did we propose to address emissions during periods of SSM?

The EPA proposed to remove the exemption for periods of startup and shutdown. Additionally, we proposed a work practice standard during periods of startup that would have allowed carbon black manufacturing facilities to vent tail gas upon startup for a period not to exceed 13 minutes, and to begin running control devices thereafter. The proposed work practice standard sought to address safety concerns surrounding startup processes at carbon black manufacturing facilities. The EPA proposed the work practice standard to mitigate the risk of explosion at carbon black manufacturing facilities upon startup due to the characteristics of the tail gas. The proposed work practice standard addressed combustibility concerns by allowing tail gas to be vented through the MUF vent for a short, time-limited period in order to prevent excess oxygen from mixing with tail gas. The EPA time-limited the proposed work practice standard to ensure sources would begin routing tail gas to control devices as soon as practicable, while accounting for variability across facilities that impact startup procedures.

2. How did the proposed amendments to address emissions during periods of SSM requirements change in the final rule?

The EPA initially proposed that the work practice standard would apply for 13 minutes upon startup. Due to comments received on the proposal, the EPA is finalizing a work practice standard that applies to both startup and shutdown of the reactor. The work practice standard allows the closed vent system to the control device to be bypassed, during both startup and shutdown of a reactor, when the excess oxygen concentration in the closed vent system is greater

than or equal to 3 percent. Additionally, the maximum bypass period for the work practice standard is extended from 13 minutes to 15 minutes. To determine when the oxygen concentration of the closed vent system falls below 3 percent, each facility must use the calculated purge duration method or oxygen sensors. The language at 40 CFR 63.1003(f)(5) has been amended in the final rule to reflect these changes.

3. What key comments did we receive on the SSM revisions and what are our responses?

The EPA received comments on several aspects of the proposed work practice standard. Comments received include requests for (1) site-specific procedures, (2) expansion of the standard to shutdown periods (in addition to startup periods), (3) an increase in the time period allowed under the work practice standard, and (4) specific regulatory language changes. We are only revising requirements where credible technical and/or safety issues were identified, while maintaining the goal of minimizing emissions during periods of startup and shutdown to the maximum extent practicable. These comments and the EPA's response to these comments are provided below.

a. Site-Specific Startup and Shutdown Procedures

Comment: The commenter stated that factors affecting the time needed for startup and shutdown procedures are specific to each facility because the time needed to purge the closed vent system and/or open and close valves depends on the configuration of the facility, common tail gas header, and the production line; the volume of the production line; the size of the valves; the production rate; and the facility-specific operating procedures and provides an example. To allow for this source-specific variability, the commenter suggested that instead of relying solely on oxygen concentration, the regulation should allow bypass of the control device during startup and shutdown of a reactor in accordance with the maximum duration calculated using the calculated purge duration method located in the startup and shutdown plan (SSP) and that the startup and shutdown occur "as expeditiously as possible." The commenter stated that the use of oxygen sensors in the MUF is not current industry practices, and that of the current 15 major

source facilities, only two of them have oxygen sensors. The commenter also stated that the calculated purge duration method in the SSP would include a calculation of the amount of time it takes to purge the production line, as well as a safety factor that accounts for the physical and technological constraints of the facility; the maximum duration could not be more than 15 minutes. The commenter stated that the SSP would provide the amount of time needed when completing startup and shutdown "as expeditiously as possible." For a more detailed summary of the comment, see the document *Summary of Comments and EPA's Responses on the National Emission Standards for Hazardous Air Pollutants Carbon Black Production Residual Risk and Technology Review and Carbon Black Production Area Sources Technology Review Proposed Rule*, which is available in docket: EPA-HQ-OAR-2020-0505.

Response: The EPA agrees that the bypass time allowed for a reactor to startup or shutdown should be source specific. The EPA acknowledges that most facilities currently do not operate oxygen sensors and relying solely on oxygen sensors to detect oxygen content in the ductwork upon startup and shutdown could lead to undetected pockets of high-oxygen concentration gases escaping the sensors, creating an explosion risk within the ductwork at a facility.

Additionally, the EPA agrees that during startup the MUF vent must be open and the common tail gas header closed when initially burning feedstock oil to purge the line of excess oxygen. If the common tail gas header is opened while the oxygen level was above 3 percent, there is a risk of explosion due to the combustible nature of the tail gas. Once the oxygen level falls below 3 percent (determined by using the calculated purge duration method discussed below), the MUF vent must gradually close while the common tail gas header is gradually opened. This gradual change helps to ensure that constant pressure is maintained within the closed vent system and common tail gas header. The EPA acknowledges that maintaining constant pressure is important. A sudden surge or interruption in tail gas flow could extinguish the flame on the control device located downstream of the common tail gas header. If the flame

is extinguished, there is a risk that combustible gases will build up in the common tail gas header; if combustible gases build up in the common tail gas header, then these gases could cause an explosion when the flame is relit.

The EPA found that all facilities currently use the calculated purge duration method to predict when the oxygen level in the ductwork drops below 3 percent. The calculated purge duration method estimates the total time a facility needs to safely startup or shutdown a carbon black production line by taking into account several factors, including the volume of tail gas in the closed vent system, the flowrate within the closed vent system, a safety factor, and the time needed to balance pressure by opening and closing the necessary valves. Using the calculated purge duration method is industry practice for facilities to determine when oxygen levels are below 3 percent.

Since all facilities currently utilize the calculated purge duration method, the EPA finds this practice to be representative of the best performing facilities within the industry. The EPA is declining to require SSPs in the final rule; instead, the EPA is finalizing a change from proposal at 40 CFR 63.1103(f) to require facilities to utilize the calculated purge duration method to determine a site-specific maximum bypass duration upon startup and shutdown. The EPA determined that including site-specific requirements at 40 CFR 63.1103(f) would accomplish the same goal as SSPs without adding additional reporting burden.

b. Work Practice Standard Should Apply During Startup and Shutdown

Comment: The commenter requested that the proposed work practice standard be revised to apply during shutdown as well as during startup. In support of their comment, the commenter provided a comprehensive discussion of the carbon black production startup and shutdown processes and the reasoning for their request for modifications to the proposed work practice standard requirements. Reasons for expanding the work practice to shutdown as well as startup include the similarities in the need to maintain constant pressure and to reduce the oxygen content in the closed vent system to under 3 percent due to the risk of explosion for both startup

and shutdown. For a summary of their detailed comments regarding startup and shutdown, see the document *Summary of Comments and EPA's Responses on the National Emission Standards for Hazardous Air Pollutants Carbon Black Production Residual Risk and Technology Review and Carbon Black Production Area Sources Technology Review Proposed Rule*, available in the docket for this rulemaking.

Response: Based on the information provided by the commenter, EPA agrees that shutdown operations present safety concerns similar to those associated with startup. Accordingly, the EPA is finalizing a revision to the proposed work practice standard so that it applies to both startup and shutdown operations.

The EPA agrees that the shutdown process presents combustibility concerns similar to startup. When facilities stop burning feedstock oil, higher oxygen content is created in the closed vent system. This creates an explosion risk if the oxygen level rises above 3 percent. Therefore, prior to removing feedstock oil from the reactor, the common tail gas header vent must be closed completely, diverting closed vent system emissions from the common tail gas header to the MUF, before the oxygen content begins to increase.

Similar to startup, constant pressure must be maintained within the closed vent system during shutdown operations to reduce the risk of explosion. To achieve constant pressure within the closed vent system, the MUF vent must be slowly opened while the tail gas header vent is slowly closed. Once the tail gas header has been completely closed and the MUF vent is completely open, the burning of feedstock oil in the reactor ceases. The EPA acknowledges that maintaining constant pressure is important. A sudden surge or interruption in tail gas flow could extinguish the flame on the CCD or other combustion device located downstream of the common tail gas header. If the flame is extinguished, there is a risk that combustible gases will build up in the common tail gas header; if combustible gases build up in the common tail gas header, then these gases create an explosion risk when the flame is relit.

c. Work Practice Standard Time Allotment

Comment: The commenter requested that the maximum time allowed to bypass the control device during startup and shutdown of a reactor be increased from 13 minutes to 15 minutes. The commenter explained that their request for this increase in time is based on the minimum time necessary to completely purge the ductwork and MUF of certain facilities. The commenter provided that this was previously agreed to by the EPA in the consent decrees below.

In 2007, the EPA began a National Enforcement Initiative to investigate the carbon black manufacturing sector. As a result of this initiative, each of the International Carbon Black Association (ICBA) member companies in the United States entered into a settlement with the EPA and the Department of Justice regarding CAA claims (hereinafter, the “Consent Decrees”). The implementation of the terms of these Consent Decrees has and will result in substantial changes to the facilities as flares are removed and different control technologies are installed at a significant cost. Many facilities have already implemented the agreed upon technologies and others are in the procurement stages.

The commenter stated that, in the preamble, the EPA explains that “the 13-minute allotment to bypass the control device, corresponds with the minimum time necessary to completely purge the ductwork and primary bag filter of the facility representing the lowest production rate.” However, the commenter suggested that when setting the 13-minute limit, it appears that the EPA did not fully consider the agreed-upon time limit in all of the consent decrees or all of the factors which affect how long it takes a facility to purge excess oxygen and introduce tail gas to the common tail gas header while balancing pressure. The commenter stated that the consent decree for Sid Richardson Carbon, Ltd. allowed a 15-minute bypass.^{8,9}

Response: The EPA acknowledges that the consent decree cited by the commenter allows a 15-minute control device bypass upon startup for the facility subject to the consent decree

⁸ *United States v. Sid Richardson Carbon, Ltd.*, 3:17-cv-01792-SDD-RLB (M.D. La.), Consent Decree, filed Dec. 22, 2017, at § III.8.oo.

⁹ *United States v. Sid Richardson Carbon, Ltd.*, 3:17-cv-01792-SDD-RLB (M.D. La.), Consent Decree, filed Dec. 22, 2017, at § III.8.oo.

allotment to bypass the control device. In their comment, the commenter provided information to the EPA concerning the source-specific nature of startup and shutdown operations at carbon black manufacturing facilities, including technical support demonstrating that one source subject to this rulemaking may need up to 15 minutes to purge the excess oxygen content in the MUF vent during startup and shutdown operations in order to mitigate combustibility concerns. To address this comment, in the final rule, the EPA is extending the proposed 13-minute bypass period to a maximum 15-minute bypass period. However, this time period is further constrained by the calculated purge duration method. The EPA is also finalizing a requirement that facilities subject to this rule use the calculated purge duration method to determine the length of the startup and/or shutdown bypass period required for a specific facility before that specific facility may begin to safely operate control devices, and the facility must begin operating control devices as soon as the facility may safely do so. In no case do the finalized requirements allow the startup or shutdown bypass period to exceed 15 minutes for any facility. The EPA is also amending the work practice standard to apply to periods of shutdown as well as startup.

As previously mentioned, carbon black production facilities currently use the calculated purge duration method to predict when the oxygen level in the closed vent system drops below 3 percent. The calculated purge duration method considers the volume of tail gas in the closed vent system, with an appropriate safety factor, and the time needed to balance pressure and close or open the necessary valves. Using the calculated purge duration method is common industry practice for facilities to determine when oxygen levels are below 3 percent.

Since all facilities currently utilize the calculated purge duration method, the EPA finds this practice to be representative of the best performing facilities within the industry. As previously discussed, the EPA is declining to require SSPs. Instead, the EPA is modifying the proposed standard at 40 CFR 63.1103(f)(5) to require facilities to utilize the calculated purge duration method or oxygen sensors to determine a site-specific maximum bypass duration upon startup and shutdown. In no case shall the maximum bypass duration period exceed 15 minutes

for any facility. The calculated purge duration method is the same approach underlying the control device bypass timeframes included in the enforcement-related consent decrees for the carbon black industry.

4. What is the rationale for our changes to the proposed amendments to address emissions during periods of SSM in the final rule?

Based on the consideration of comments received concerning technical and safety concerns with the proposed work practice standard, the EPA revised the work practice standard provisions in the final rule. As discussed in our responses to comments in section IV.C.3 of this preamble, we are only revising requirements where credible technical and/or safety issues were identified, while maintaining the goal of minimizing emissions during periods of startup and shutdown to the maximum extent practicable.

E. Other Technical Amendments to the Carbon Black Production NESHAP

1. Boiler and Process Heater Annual Tune-Up Requirements

a. What amendments did we propose for boiler and process heater annual tune-up requirements?

As a result of the EPA's assessment of the MACT standards that currently apply to the Carbon Black Production source category under subpart YY, the EPA received a comment that there may be instances where carbon black production process vents at affected sources route emissions to a boiler or process heater for use as fuel gas and may not be subject to any requirements. Under the existing standards, although emission streams may be subject to the Carbon Black Production MACT, these streams are exempt from any requirements under the rule when emissions are routed to a boiler or process heater for use as fuel gas. Under the Boiler MACT, process heaters and boilers covered under another standard (as with the Carbon Black Production MACT) are not subject to the Boiler MACT.

The EPA proposed to revise subpart YY to include boiler and process heater annual tune-up requirements for those boilers and process heaters that receive tail gas for use as fuel gas.

These provisions were proposed in 40 CFR 63.1103(f)(3)(iii) of the final rule. The annual tune-up provisions paralleled those specified under the Boiler MACT.

b. How did the proposed boiler and process heater tune-up requirements change in the final rule?

The final rule revises the definition for “process vent” to remove the fuel gas exemption for the Carbon Black Production source category. This revised change ensures that the annual tune-up requirements apply to process heaters and boilers, as intended.

The final rule also revises the text at 40 CFR 63.1103(f)(3)(iii)(A) (first sentence) to require inspection to be of the “combustion device” instead of the “burner,” and at 40 CFR 63.1103(f)(iii)(B), (C), (D) and (E) to provide industry-specific clarification on tune-up requirements.

c. What key comments did we receive on the proposed annual boiler and process heater tune-up requirements and what are our responses?

The EPA received comments on the proposed boiler and process heater tune-up requirements related to the applicability language and specified tune-up procedures. These comments and the EPA’s responses and subsequent changes to the proposed boiler and process heater tune-up provisions are provided below.

i. Applicability

Comment: The commenter suggested that the proposed language for the annual tune-up requirement be changed so that it applies to the process heaters and boilers that the EPA intended. The commenter noted that the EPA explained that it added the annual tune-up requirement to close a perceived loophole. The commenter stated that they are unsure whether the proposed modifications in the proposal achieved the EPA’s goal. The commenter noted that while the preamble to the proposed rule identifies the target of the annual tune-up requirements to be boilers and process heaters receiving emissions to use as fuel gas, the language in the proposed rule may not apply to the intended boilers or process heaters.

The commenter explained that, in the current regulations, emission streams that are routed to a boiler or process heater for fuel gas are not regulated as a process vent, because “[g]as streams transferred for fuel value (*i.e.*, net positive heating value), use reuse, or sale for fuel value, use, or reuse,” are excluded from the definition of process vent. 40 CFR 63.1101. Therefore, the commenter noted that when emissions are routed to a boiler or process heater for use as fuel gas at a carbon black production facility, those points of discharge are not process vents. The proposed rule does not alter the definition of process vent, and the commenter was uncertain what effect the changes to Table 8 of the proposed regulatory text would have on the current standards. The commenter stated that changes in Table 8 of the proposed regulatory text apply only to “process vents” and under the definition of process vents, this would necessarily mean that it could not include gas streams routed to boilers or process heaters for fuel value. For a more detailed summary of the comment, see *Summary of Comments and EPA’s Responses on the National Emission Standards for Hazardous Air Pollutants Carbon Black Production Residual Risk and Technology Review and Carbon Black Production Area Sources Technology Review Proposed Rule*, which is available in docket: EPA-HQ-OAR-2020-0505.

Response: The EPA acknowledges that the proposed regulatory text was unclear and could lead to subject facilities not complying with the added boiler and process heater requirements. To resolve this issue, the EPA is revising the definition for process vent to remove the fuel gas exemption for the Carbon Black Production source category. Specifically, the EPA is finalizing an amended definition of “process vent” to remove the exemption for gas streams transferred for fuel value, use, reuse, or sale for fuel value, use, or reuse for the carbon black production source category.

ii. Annual Tune-Up Requirements

Comment: Commenters also requested tailored modifications to the tune-up requirements to better reflect the specifications of combustion devices typically used in the carbon black production process. The commenter noted that carbon black combustion devices differ

significantly from natural gas combustion devices such that not all of the proposed tune-up requirements apply. In support of their comment, the commenter states that additional optimization outside of inspection and cleaning may not be possible for all facilities. For a more detailed summary of the comment, see *Summary of Comments and EPA's Responses on the National Emission Standards for Hazardous Air Pollutants Carbon Black Production Residual Risk and Technology Review and Carbon Black Production Area Sources Technology Review Proposed Rule*, which is available in docket: EPA-HQ-OAR-2020-0505.

Response: The EPA agrees with the commenter that, as a result of the nature of the burner configuration and design of tail gas fired boilers and process heaters in the Carbon Black Production source category, the tune-up requirements of the proposed rule may not be able to be performed as written. As the commenter noted, due to the lack of an inspection port for the “typical” burner configuration used in the carbon black production process, it may not be possible to perform a direct inspection of the burner in operation, as described in 40 CFR 63.1103(f)(3)(iii)(A). Thus, the EPA is finalizing the suggested revision to the regulatory text at 40 CFR 63.1103(f)(3)(iii)(A) to read “[i]nspect the combustion device for damage, wear, and buildup of material that could impact effectiveness” rather than “inspect the burner.” The EPA disagrees in part with the other changes suggested by the commenter. As noted by the commenter, a “typical” burner configuration may not be amenable to inspection of the flame pattern and adjustment of the burner, but it is possible in some configurations. The regulatory text at 40 CFR 63.1103(f)(iii)(B) has been amended to require the inspection and adjustment only when possible based upon the physical configuration of the burner. Similarly, the requirements of 40 CFR 63.1103(f)(iii)(C) state to “[i]nspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly.” The EPA agrees that not all configurations of systems controlling air-to-fuel ratio have calibrated components, but some systems may have components that are calibrated and would need that calibration verified. However, if a burner system does not have anything to be calibrated, then

ensuring proper calibration is not necessary; the inspection of the fuel to air ratio controlling mechanism in that case could be as simple as verifying that there are no obstructions to the air intake in a natural draft system and verifying proper fan operation for a fixed air flow fan. For these reasons, the EPA also agrees that 40 CFR 63.1103(f)(iii)(C) should not be finalized as proposed and is amending the final language to reflect that ensuring proper calibration is only necessary for calibrated components of the air-to-fuel system.

The EPA disagrees with the commenter that 40 CFR 63.1103(f)(iii)(D) and (E) should not be finalized and disagrees that measurement of carbon monoxide (CO) is a poor indicator of optimized performance. As CO is a primary component of tail gas, any tail gas not combusted by the boiler or process heater will result in CO emissions. Additionally, CO is produced from the incomplete combustion of hydrocarbons in the tail gas. During proper operation of the combustion device, the output of CO from either uncombusted tail gas or from incomplete combustion is minimized. The EPA agrees that optimization beyond the inspection and cleaning required in 40 CFR 63.1103(f)(iii)(A) may not be possible for the configuration of some carbon black facility combustion devices. In such a scenario, the proposed language of 40 CFR 63.1103(f)(iii)(D) was clear that “[t]his optimization should be consistent with the manufacturer’s specifications, if available.” In instances where there are no manufacturer’s recommendations for optimization, the cleaning of the combustion device constitutes the optimization procedure, and CO measurement should be taken before and after cleaning the combustion device. The regulatory text at 40 CFR 63.1103(f)(iii)(D) has been amended from that proposed to more clearly reflect that, in the cases where no manufacturer’s specification for optimization are available, the inspection and cleaning procedures of 40 CFR 63.1103(f)(iii)(A) fulfill the requirements of optimization and that when available, manufacturer’s specification should be used for the optimization procedure. The regulatory text at 40 CFR 63.1103(f)(iii) (E) has been amended from that proposed to reflect that if adjustments are not or cannot be made,

the measurements of CO are performed after the inspection and cleaning procedures of 40 CFR 63.1103(f)(iii)(A) are performed.

d. What is the rationale for our final changes to the proposed boiler and process heater annual tune-up provisions?

Based on the consideration of comments received on the combustion devices typically used in the carbon black production process, we clarified and revised the applicability and requirements of the annual boiler and process heater tune-up requirements to better reflect the combustion devices typically used. See our comment response directly above in subsection ii, for our rationale for revisions based on our evaluation of comments.

V. What is the rationale for our final decisions and amendments for the Cyanide Chemicals Manufacturing source category?

For each issue, this section provides a description of what we proposed and what we are finalizing for the issue, the EPA's rationale for the final decisions and amendments, and a summary of key comments and responses (when applicable). For all comments not discussed in this preamble, comment summaries and the EPA's responses can be found in the comment summary and response document available in the docket for this source category.

A. Residual Risk Review for the Cyanide Chemicals Manufacturing Source Category

1. What did we propose pursuant to CAA section 112(f) for the Cyanide Chemicals Manufacturing source category?

On January 15, 2021 (86 FR 3906), the EPA proposed that risk posed by emissions from the source category is acceptable, that the current NESHAP provides an ample margin of safety to protect public health, and that additional standards are not necessary to prevent an adverse environmental effect. The EPA sets standards under CAA section 112(f)(2) using "a two-step standard-setting approach, with an analytical first step to determine an 'acceptable risk' that considers all health information, including risk estimation uncertainty, and includes a presumptive limit on MIR of approximately 1-in-10 thousand." (54 FR 38045, September 14,

1989). The maximum estimated cancer risk was below the presumptive limit of acceptability and the noncancer risk results indicate there is minimal likelihood of adverse noncancer health effects due to HAP emissions from this source category. The proposed decision on ample margin of safety was based on weighing factors relevant to this particular source category, including the risk posed by emissions from the category and the costs and cost-effectiveness of additional controls to reduce risk further, as well as uncertainties in the baseline emissions estimates used in estimating risk, the costs and effectiveness of the work practices we considered to reduce these emissions, and the amount of risk reduction that could be achieved with the work practices. A more thorough discussion of the risk assessment is included in the *Residual Risk Assessment for the Cyanide Chemicals Manufacturing Source Category in Support of the Risk and Technology Review 2021 Final Rule* document, available in the docket for cyanide chemicals manufacturing (Docket-EPA-HQ-OAR-2020-0532). In the proposed rule, as presented in Table 2 below, based on modeling actual emissions from the source category for all 13 facilities, we estimated inhalation cancer risk to the individual most exposed was equal to 5-in-1 million. The estimated incidence of cancer due to inhalation exposures resulting from emissions from the source category was 0.004 excess cancer cases per year, or one excess case every 250 years with 61,653 people exposed to an excess cancer risk greater than or equal to 1-in-1 million due to inhalation exposure to HAP emissions from the source category. Emissions of acrylonitrile from process vents account for 95 percent of the cancer incidence. The Agency estimated that the maximum chronic noncancer TOSHI from inhalation exposure for this source category was equal to 1. In the screening assessment of worst-case acute inhalation impacts, we estimated a maximum HQ of 1 (due to hydrogen cyanide) based on the REL. In the proposal, the EPA estimated risks based on actual and allowable emissions from cyanide chemicals manufacturing sources, and we considered these in determining acceptability. As shown in Table 2, the chronic cancer and non-cancer risks are the same for allowable emissions as they are for actual emissions.

Table 2. Inhalation Risk Assessment Summary for Cyanide Chemicals Manufacturing¹ Source Category

Risk assessment	Number of facilities ²	Maximum individual cancer risk (1-in-1 million) ³	Estimated population at increased risk of cancer ≥ 1 -in-1 million	Estimated population at increased risk of cancer ≥ 10 -in-1 million	Estimated annual cancer incidence (cases per year)	Maximum chronic noncancer TOSHI ⁴	Maximum screening acute noncancer HQ ⁵
Baseline Actual Emissions							
Source Category	13	5	61,653	0	0.004	1 (neurological)	1 (REL)
Facility-wide	13	200	266,532	58,000	0.04	1 (neurological)	
Baseline Allowable Emissions							
Source Category	13	5	61,653	0	0.004	1 (neurological)	

¹ Based on actual and allowable emissions.

² Number of facilities evaluated in the risk assessment. Includes 13 operating cyanide chemicals manufacturing facilities subject to 40 CFR part 63, subpart YY.

³ Maximum individual excess lifetime cancer risk due to HAP emissions.

⁴ Maximum TOSHI. The target organ with the highest TOSHI for the Cyanide Chemical Manufacturing source category is the neurological system.

⁵ The maximum estimated acute exposure concentration was divided by available short-term threshold values to develop an array of HQ values. The acute HQ shown was based upon the lowest acute 1-hour dose-response value, the REL for hydrogen cyanide. When an HQ exceeds 1, we also show the HQ using the next lowest available acute dose-response value.

The EPA also estimated inhalation risk based on facility-wide emissions. The estimated maximum individual excess lifetime cancer risk based on facility-wide emissions was 200-in-1 million, with 0.04 excess cancer cases per year, or one case every 25 years. This cancer risk is driven by emissions sources that are not in the Cyanide Chemicals Manufacturing source category; specifically, emissions of ethylene oxide and polycyclic organic matter from non-category sources account for 95 percent of the cancer incidence. Approximately 150 people are exposed to an excess cancer risk greater than or equal to 100-in-1 million, with 266,532 people exposed to an excess cancer risk above 1-in-1 million. The estimated maximum chronic noncancer TOSHI values for the facility-wide assessment was the same as estimated based on actual and allowable emissions from the source category. The TOSHI value was equal to 1 for

neurological effects driven by hydrogen cyanide emissions from process vents, wastewater, and equipment leaks.

Regarding the facility-wide risks due to ethylene oxide emissions, which are emitted by sources that are not part of the Cyanide Chemicals Manufacturing source category, we intend to continue to evaluate those facility-wide estimated emissions and risks further and may address these in separate actions, as appropriate. In particular, the EPA is addressing ethylene oxide in response to the results of the latest National Air Toxics Assessment (NATA) released in August 2018, which identified the chemical as a potential concern in several areas across the country.¹⁰ The latest NATA estimates that ethylene oxide significantly contributes to potential elevated cancer risks in some census tracts across the U.S. (less than 1 percent of the total number of tracts). These elevated risks are largely driven by an EPA risk value that was updated in late 2016. The EPA is taking steps to address ethylene oxide emissions by: (1) reviewing and, as appropriate, revising CAA regulations for facilities that emit ethylene oxide—starting with air toxics emissions standards for miscellaneous organic chemical manufacturing facilities (85 FR 49084, August 12, 2020) and commercial sterilizers; and (2) working with industry and state, local, and tribal air agencies to achieve near-term emission reductions. The EPA posts updates on its work to address ethylene oxide at: <https://www.epa.gov/ethylene-oxide>.

We also conducted a multipathway screening assessment for the source category, and the results of the screening assessment are presented in the risk report titled *Residual Risk Assessment for the Cyanide Chemicals Manufacturing Source Category in Support of the 2021 Risk and Technology Review Final Rule*, and section IV of the proposal preamble (86 FR 3906, January 15, 2021) available in the docket for this action. A screening value is not an estimate of the cancer risk or a noncancer HQ (or HI). Rather, a screening value represents a high-end estimate of what the risk or HQ may be. For this source category the highest cancer screening

¹⁰ NATA is the Agency's nationwide air toxics screening tool, designed to help the EPA and state, local, and tribal air agencies identify areas, pollutants, or types of sources for further examination.

value was a Tier 2 cancer screening value less than 1 for arsenic emissions, which means that we are confident that the multipathway cancer risk is lower than 1-in-1 million. The highest Tier 2 non-cancer screening value for the category was less than 1 for mercury emissions, which can be interpreted to mean that we are confident that the chronic HQ for mercury is less than 1.

In evaluating the potential for multipathway effects from emissions of lead, the EPA compared modeled annual lead concentrations to the secondary NAAQS level for lead (0.15 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$), arithmetic mean concentration over a 3-month period). The highest annual average lead concentration, 0.000004 $\mu\text{g}/\text{m}^3$, is far below the NAAQS level for lead, indicating a low potential for multipathway impacts from lead.

Based on the results of the environmental risk screening analysis, we do not expect an adverse environmental effect as a result of HAP emissions from this source category. For further additional detail on the environmental risk screening assessment, refer to the *Residual Risk Assessment for the Cyanide Chemicals Manufacturing Source Category in Support of the Risk and Technology Review 2021 Final Rule*.

In determining whether risk is acceptable for this source category, the EPA considered all available health information and risk estimation uncertainty, including the uncertainty in the emissions data. Further discussion of the uncertainties in our risk assessment can be found in section III.C.7 of the preamble to the proposed rule at 86 FR 3918. Under the ample margin of safety analysis, we evaluated the cost and feasibility of available control technologies and other measures (including the controls, measures, and costs reviewed under the technology review) that could be applied to this source category to further reduce the risks (or potential risks) due to emissions of HAP from the source category. At proposal, we determined that the risk from Cyanide Chemicals Manufacturing emissions is acceptable and that the standards provide an ample margin of safety to protect public health and prevent an adverse environmental effect. In this action, we are finalizing our proposed determination. See section IV.C of the proposal preamble (86 FR 3906, 3923-3924) for a discussion of the results of our risk assessment and

analyses and our proposed decisions regarding risk acceptability, ample margin of safety, and adverse environmental effects. The EPA is not amending the Cyanide Chemicals Manufacturing NESHAP based on the risk review conducted pursuant to CAA section 112(f). The maximum cancer risk for all facilities was 5-in-1 million, which is 20 times below 100-in-1 million, the presumptive upper limit of acceptable risk. In addition, there were no facilities with an estimated maximum chronic noncancer HI or maximum HQ greater than 1. Based upon these considerations and the lack of additional cost-effective control technologies to reduce risk further, we proposed and are finalizing a determination that the 2002 Cyanide Chemicals Manufacturing NESHAP requirements provide an ample margin of safety to protect public health. Based on the results of our environmental risk screening assessment, we also proposed and are finalizing a determination that more stringent standards are not necessary to prevent an adverse environmental effect.

2. How did the risk review change for the Cyanide Chemicals Manufacturing source category?

We did not receive any information that changed our determination concerning risk and we are finalizing our proposed conclusion on the risk review.

3. What key comments did we receive on the risk review, and what are our responses?

We received several comments regarding the proposed risk review and our proposed determination that no revisions to the standard were warranted under CAA section 112(f)(2). Comments both supported and suggested changes to our risk review. Commenters opposed our proposed decisions regarding risk acceptability and certain aspects of our risk assessment methodology. After review of these comments, we determined that no changes to the standard were necessary because the current standards provide an ample margin of safety to protect public health. The comments and our specific responses can be found in the document, *Summary of Comments and EPA's Responses on the National Emission Standards for Hazardous Air Pollutants: Cyanide Chemicals Manufacturing Residual Risk and Technology Review Proposed Rule*, which is available in docket: EPA-HQ-OAR-2020-0532.

4. What is the rationale for our final approach and final decisions for the risk review?

We evaluated all the comments on the EPA's risk review and determined that no changes are needed. For the reasons explained in the proposed rule, we determined that the risk from the Cyanide Chemicals Manufacturing source category is acceptable, the current standards provide an ample margin of safety to protect public health, and more stringent standards are not necessary to prevent an adverse environmental effect. Therefore, pursuant to CAA section 112(f)(2), we are finalizing our residual risk determination as proposed.

B. Technology Review for the Cyanide Chemicals Manufacturing Source Category

1. What did we propose pursuant to CAA section 112(d)(6) for the Cyanide Chemicals Manufacturing source category?

At proposal, we proposed to determine that it is not necessary to revise the existing standards pursuant to CAA section 112(d)(6) because we did not identify developments in practices, processes, or control technologies that would result in cost-effective emission reductions for the Cyanide Chemicals Manufacturing source category. Additional information on our technology review can be found in the memorandum, *Technical Support Document for the Cyanide Chemicals Manufacturing NESHAP Residual Risk and Technology Review Proposal*, which is available in the docket for this action (see Docket ID No. EPA-HQ-OAR-2020-0532-0025) and section IV.D of the proposal preamble (86 FR 3924). The EPA is not amending the Cyanide Chemicals Manufacturing NESHAP based on our technology review. However, we did identify a potential gap in the regulation, and proposed standards for process wastewater at existing sources and upstream suppression of process wastewater at new sources under CAA sections 112(d)(2) and (3). The final approach related to that issue is discussed in section V.C of this preamble.

2. How did the technology review change for the Cyanide Chemicals Manufacturing source category?

The technology review did not change from proposal. Therefore, we are finalizing our determination that no revisions to the NESHAP are necessary pursuant to CAA section 112(d)(6).

3. What key comments did we receive on the technology review, and what are our responses?

We received two comments regarding the proposed technology review and our proposed determination that no revisions were warranted under CAA section 112(d)(6). One commenter suggested changes to our technology review to include additional technologies related to flares and equipment leaks. After review of these comments, we determined that no changes to the standards were necessary because these technologies would not result in cost-effective emission reductions for the cyanide chemicals manufacturing source category. The comments and our specific responses can be found in the document, *Summary of Comments and EPA's Responses on the National Emission Standards for Hazardous Air Pollutants: Cyanide Chemicals Manufacturing Residual Risk and Technology Review Proposed Rule*, which is available in docket: EPA-HQ-OAR-2020-0532.

4. What is the rationale for our final approach and final decisions for the technology review?

Our technology review sought to identify add-on control technology that was not identified during the original NESHAP development and improvements to existing add-on controls. We also sought to identify new work practices, operational procedures, process changes, pollution prevention alternatives, or techniques that have the potential to reduce emissions. Based on our review, we did not identify any such developments that would result in cost-effective emission reductions for the Cyanide Chemicals Manufacturing source category. Since proposal, no information has been presented to cause us to change the proposed determination. Consequently, we are finalizing our CAA section 112(d)(6) determination as proposed.

C. Amendments Addressing Emissions During Periods of SSM for the Cyanide Chemicals Manufacturing Source Category

1. What amendments did we propose to address emissions during periods of SSM?

Consistent with the 2008 decision in *Sierra Club v. EPA*, the EPA evaluated the Cyanide Chemicals Manufacturing NESHAP requirements to identify the need to eliminate any SSM exemptions in the rule to ensure that standards that apply during normal operations apply at all times. As noted at proposal (86 FR 3906, 3924), the Cyanide Chemicals Manufacturing source category NESHAP did not include an exemption for SSM events, and already included standards that apply at all times, including periods of SSM. Therefore, we determined that the NESHAP was already consistent with *Sierra Club v. EPA*, in which the Court vacated two provisions that exempted sources from the requirement to comply with otherwise applicable CAA section 112(d) emission standards during periods of SSM. However, we proposed revisions to subpart YY at 40 CFR 63.1108 through 40 CFR 63.1112 to remove any references associated with the GMACT that contained SSM exemptions for other source categories and from referenced subparts to reduce confusion. The EPA did not propose any other amendments addressing emissions during SSM periods because of our determination that the NESHAP already included standards that apply at all times, including periods of SSM.

2. How did the proposed SSM-related amendments change in the final rule?

We are finalizing our proposal to remove SSM exemption language included in 40 CFR 63.1108 through 40 CFR 63.1112 and GMACT referenced subparts.

3. What key comments did we receive on SSM-related emissions and what are our responses?

While one commenter provided support for the EPA's removal of references to provisions that contained SSM exemptions for other source categories and from referenced subparts to reduce confusion, the commenter expressed concern that the EPA had not removed references to SSM exemptions in HON-referenced provisions and that the EPA must assure full removal of SSM exemptions in the final rule to assure compliance with the CAA.

Other commenters expressed concern that the EPA had not established work practice standards to cover situations that they contend had been covered under their SSM plan included

under the SSM exemption requirements that were proposed to be removed. The commenter requested that the EPA include provisions for specified circumstances that were previously covered under their SSM plan similar to what was included for the ethylene production source category in subpart YY.

These comments and the EPA's responses to these comments are provided below.

a. Elimination of the SSM Exemption

Comment: One commenter noted that SSM events play a considerable role in the issue of pollution and environmental contamination as these processes increase an industrial plant's pollution and noted concern that the EPA would continue to maintain SSM exemptions in this rule. Another commenter supported the removal of the SSM exemptions, stating that removal of these provisions is required to assure compliance with the CAA because this is a 'necessary' revision under CAA section 112(d)(6).

Response: As discussed in section V.C.1 of this preamble, we are finalizing revisions (as proposed) to subpart YY at 40 CFR 63.1108 through 40 CFR 63.1112 to remove any references associated with the GMACT that contained SSM exemptions for other source categories and referenced subparts.

Comment: One commenter stated that the EPA's proposed standards are illegal because the HON standard the EPA is proposing to incorporate for wastewater requirements includes the illegal SSM exemption that the EPA admits it must remove from the cyanide chemical manufacturing rules here under CAA section 112(d)(6). The commenter stated that the EPA may not lawfully remove the exemption and then immediately reinstate it by incorporation of an equally illegal SSM exemption in the HON.

Response: The EPA assessed the specific HON wastewater provisions referenced in the proposed Cyanide Chemicals Manufacturing MACT rule and did not identify any language containing exemptions for periods of SSM. The commenter made a general allegation about

exemptions and did not identify any specific provisions that contained exemptions. The EPA has therefore not made changes to the final rule based on this comment.

b. Pressure Relief Devices (PRD) in HAP Service

Comment: One commenter stated, “[p]ressure relief discharges to the atmosphere from cyanide chemicals manufacturing covered processes are rare. However, if a discharge from a [PRD] occurs, it would currently be addressed under the SSM plan and the emissions would be reported to the appropriate regulatory entities if the amount is greater than an applicable Reportable Quantity (RQ) for any air contaminant.” The commenter contended that, because the SSM plan will be proposed to be withdrawn 180 days after the rule is amended, “any modifications to the process or additions of emissions control equipment are not feasible in this timeframe.” Therefore, the commenter suggested including in this rule the same work practice requirements for PRDs that are in the subpart YY regulation for the ethylene production source category, which the commenter alleges also has a small number of PRDs venting to the atmosphere.

Specifically, the commenter recommended that the EPA incorporate the work practice standards of 40 CFR 63.1107(h)(3) through (8) within the Cyanide Chemicals manufacturing rule in order to “address any potential discharge from a [PRD] that is on fixed equipment and to exempt any [PRD] from infeasible monitoring for portable containers and mobile equipment.” The commenter requested that any referenced citations in the aforementioned section be aligned with the Cyanide Chemicals Manufacturing MACT rule and noted that certain ethylene flare provisions are not applicable to this source category.

Additionally, the commenter suggested that the associated recordkeeping and reporting requirements in 40 CFR 63.1109(i) and 63.1110(e)(8) may also be appropriate to add to the rule in support of the PRD work practice standards.

Response: The EPA has not added the provisions requested by the commenter. While these or similar provisions exist in NESHAP for some source categories, the EPA does not have

data (nor was sufficient data provided) to demonstrate that such provisions are warranted for the cyanide chemicals manufacturing NESHAP. The commenter requested these provisions be added to the Cyanide Chemicals Manufacturing NESHAP because they exist in the Ethylene Production NESHAP. The commenter did not definitively assert that any PRDs exist that would be subject to this action, nor whether they are controlled or atmospheric PRDs.

The commenter stated that there is insufficient time to implement process modifications/add emissions control equipment within 180 days after the rule is amended. This statement acknowledged that the process can be modified and emissions control equipment can be used to meet standards at all times. Without data to support the need for specific work practice provisions for PRDs, including the prevalence of PRDs, whether they are routed to control devices, the frequency of releases, magnitude of emissions during releases, and costs of further controls, we have insufficient basis to add these requirements for the cyanide chemicals manufacturing source category.

c. Maintenance Vents

Comment: One commenter requested that, since the SSM plan and various exceptions are proposed to be removed within 180 days after the rule is amended, the same work practice requirements for maintenance vents that are in the subpart YY regulation for the ethylene production source category be included “so that it is clear that equipment can be cleared and opened for maintenance or other similar work.”

The commenter provided that some covered facilities include similar work practice provisions in Texas New Source Review air permits for routine maintenance activities. According to the commenter, “[i]ncluding provisions for maintenance vents in the final rule will clarify the requirements when these maintenance activities occur.”

The commenter suggested the following requirements and options when incorporating the subpart YY regulation for the ethylene production source category maintenance vents language:

- Limit the lower explosive limit (LEL) to 10 percent; and

- Limit the concentration of hydrocarbons or hydrogen cyanide to 500 ppmv measured using one of the following options:
 - The use of an instrument that complies with EPA Method 21 in 40 CFR part 60, appendix A (measures total hydrocarbon concentration)
 - The use of colorimetric gas detector tubes provided the tube is used in accordance with manufacturer's guidelines (measures hydrogen cyanide concentration); or
 - The use of an electrochemical sensor for hydrogen cyanide (measures hydrogen cyanide concentration).

Furthermore, the commenter suggested that the recordkeeping and reporting requirements in 40 CFR 63.1109(f) and 63.1110(e)(5) may also be appropriate to add to the rule in support of the maintenance venting provisions.

Response: The EPA has not made the commenter's suggested revisions. The commenter did not provide sufficient information regarding why they could not meet the standards or why their suggested requirements should be included.

Additionally, neither limiting the LEL to 10 percent nor limiting the concentration to 500 ppmv when considering hydrogen cyanide are defensible. The 10 percent LEL for hydrogen cyanide in air is 5,600 ppm. Hydrogen cyanide is highly toxic by all routes of exposure and may cause central nervous system, cardiovascular, and respiratory effects that could lead to death. The Occupational and Safety and Health Administration (OSHA) has concluded that a variety of symptoms are associated with exposure to hydrogen cyanide at levels less than 10 ppm and has established a 4.7-ppm 15-minute short term exposure limit (STEL) as the permissible exposure limit (PEL).¹¹

d. Storage Vessel Degassing – Fixed Roof Storage Tanks

¹¹ <https://www.cdc.gov/niosh/idlh/74908.html>, 1988 OSHA PEL Project - Hydrogen Cyanide | NIOSH | CDC

Comment: One commenter requested that the EPA include the same requirements for storage vessel degassing for fixed roof tanks that are in the subpart YY regulation for the ethylene production source category. The commenter suggested the following requirements and options when incorporating the subpart YY regulation for ethylene production storage vessel degassing language:

- Limit the LEL to 10 percent; and
- Limit the concentration of hydrocarbons or hydrogen cyanide to 500 ppmv measured using one of the following options:
 - The use of an instrument that complies with EPA Method 21 in 40 CFR part 60, appendix A (measures total hydrocarbon concentration)
 - The use of colorimetric gas detector tubes provided the tube is used in accordance with manufacturer's guidelines (measures hydrogen cyanide concentration); or
 - The use of an electrochemical sensor for hydrogen cyanide (measures hydrogen cyanide concentration).

Response: The EPA has not made the commenter's requested revisions. However, insufficient information was provided to support their contention that they could not meet the standards during storage vessel degassing or why their suggested requirements should be included.

As discussed in section V.C.3.c above for Maintenance Vents, neither limiting the LEL to 10 percent or limiting the concentration to 500 ppmv when considering hydrogen cyanide are defensible. The 10 percent LEL for hydrogen cyanide in air is 5,600 ppm. Hydrogen cyanide is highly toxic by all routes of exposure and may cause central nervous system, cardiovascular, and respiratory effects that could lead to death. The OSHA has concluded that a variety of symptoms

are associated with exposure to hydrogen cyanide at levels less than 10 ppm and has established a 4.7-ppm 15-minute STEL as the PEL.¹²

4. What is the rationale for our final changes to the SSM-related amendments?

We evaluated all of the comments on the EPA's proposed amendments to the SSM provisions. For the reasons explained in the proposed rule (86 FR 3906, 3924), we determined that these amendments, which remove and revise provisions related to SSM, are necessary to ensure there is no confusion that standards are required to apply at all times, consistent with *Sierra Club v. EPA*. More information concerning the amendments we are finalizing for SSM is in the preamble to the proposed rule and in our specific responses to the comments above (section V.C.3). Therefore, we are finalizing our amendments for the SSM provisions as proposed.

D. Other Technical Amendments to the Cyanide Chemicals Manufacturing NESHAP

1. What wastewater provision amendments did we propose?

As discussed in section II.D of this preamble and in the proposal preamble for the Cyanide Chemicals Manufacturing NESHAP (see 86 FR 3906, 3920-3921), the EPA proposed standards pursuant to CAA sections 112(d)(2) and (d)(3) for process wastewater from existing cyanide chemical manufacturing process units, which was previously unregulated. We proposed that process wastewater sources at existing sources comply with HON wastewater requirements. We proposed the HON requirements for cyanide chemicals manufacturing existing sources because the HON requirements represented: (1) the measures employed by the best performing sources in the category; and (2) an acceptable means of compliance for wastewater emissions at sources subject to subpart YY. We also proposed adding the HON requirements for waste management units upstream of an open or closed biological treatment process to the new source standard to ensure demonstrable compliance measures are in place for these sources.

¹² <https://www.cdc.gov/niosh/idlh/74908.html>, 1988 OSHA PEL Project - Hydrogen Cyanide | NIOSH | CDC

2. How did the proposed wastewater provision amendments change in the final rule?

We are finalizing the proposed wastewater provision amendments with minor clarifications (see section V.D.3.d).

3. What key comments did we receive on the proposed wastewater provision amendments and what are our responses?

Environmental groups provided comments on the basis for the EPA's selected standards and contended that the proposed limits were not sufficient to satisfy CAA sections 112(d)(2)-(3), which requires the maximum achievable degree of emission limitation.

Industry commenters requested that clarifications of the applicability of the wastewater requirements be included in the final rule and that the EPA provide additional compliance options to what was proposed in the final rule. These commenters also requested that the EPA include a test method for hydrogen cyanide or cyanide compounds in the final rule.

These comments and the EPA's responses are provided below.

a. Basis-Support for Wastewater Provisions

Comment: One commenter supported the EPA's recognition that it must set limits on uncontrolled HAP emissions from process wastewater under CAA section 112(d)(6)—including hydrogen cyanide, acetonitrile, and acrylonitrile,¹³ but contended that the limits are not strong enough to satisfy CAA sections 112(d)(2)-(3), which requires the maximum achievable degree of emission limitation.

The commenter stated that the EPA proposes “to just require compliance with the [HON] wastewater requirements for process wastewater and upstream waste management units at existing sources—and to add HON requirements for waste management units.”¹⁴ The commenter claimed that the EPA does not discuss what the proposed requirements are in the preamble other than referencing the outdated standard.

¹³ 86 FR at 3920 & n.23, 3921

¹⁴ 86 FR at 3921.

According to the commenter, the EPA's proposed wastewater standards are "illegally and arbitrarily weak and must be strengthened before finalizing." The commenter stated that the EPA has not performed any floor analysis as required by CAA section 112(d)(3) and instead appears to rely on the outdated 2008 HON rule and old and unreliable data, not included here, as its justification for not requiring stronger wastewater standards. The commenter noted that there is no assessment of what the best-performing standards have achieved, or what the average emission limitation achieved is. The commenter added that the EPA also does not demonstrate that the 2008 HON standards satisfy the CAA sections 112(d)(2)-(3) test for cyanide chemical manufacturing wastewater process sources.

Lastly, the commenter asserted that the EPA's proposed wastewater standards are illegal and arbitrary because the EPA has given only a conclusory statement to attempt to satisfy the beyond-the-floor requirement of CAA section 112(d)(2). According to the commenter, the EPA has failed to show how its proposal reflects the "maximum achievable" degree of emission limitation for these sources. The commenter stated that citing to data not in the record from 2004, without discussion or any rational explanation, does not meet the EPA's statutory obligation. The commenter contended that the EPA should collect current data, review more recent wastewater control methods, and perform a lawful beyond-the-floor analysis to ensure that it requires the "maximum achievable" degree of emission reduction in the final standards.

Response: The EPA evaluated the data available to the Agency at the time the proposed MACT standards for process wastewater at existing cyanide chemicals manufacturing sources were developed. We also reviewed title V permits for all cyanide chemicals manufacturing facilities and determined that all existing facilities subject to the cyanide NESHAP are also subject to the HON wastewater requirements or other NESHAP that also incorporate those requirements. We concluded that these requirements constitute the performance of the best performing facilities in the source category. These standards represent the best measures that we identified for minimizing wastewater emissions from the category, and we did not identify

additional measures that could further reduce emissions “beyond the floor”. The commenter did not provide any data to support their conclusion that these requirements are not representative of the best performers.

Our conclusion at proposal that the HON process wastewater requirements represent the MACT floor has not changed and we are finalizing those requirements with minor clarifications (see section V.D.3.d of this preamble for minor clarification changes made in the final rule).

b. Fraction Measured (Fm)/Fraction Removal (Fr) Values for Hydrogen Cyanide/Cyanide Compounds

Comment: One commenter recommended that the EPA provide a Fm value for hydrogen cyanide or cyanide compounds so that the regulated entity can comply with the applicability option described in 40 CFR 63.144(b)(1) of subpart G. Similarly, the commenter also requested that the EPA provide a Fr value for hydrogen cyanide or cyanide compounds so that the regulated entity can comply with the option available in 40 CFR 63.138(e)(2) of subpart G. The commenter recommended that this value would be no greater than 0.93, as it is the removal requirement for new cyanide chemicals manufacturing process units, but also noted it could be less based on the physical properties of hydrogen cyanide or cyanide compounds.

Response: 40 CFR 63.144(b)(1) allows several options for determining how to calculate the annual average concentration, including knowledge of the wastewater, bench-scale or pilot scale test data, or test data from sampling at the point of determination or at a location downstream of the point of determination. For free cyanide, the final rule adds specific procedures for determining the annual average concentration of free cyanide (see 40 CFR 63.1103(g)(5)(vi) of the final rule). For compliance with the wastewater free cyanide analysis provisions of Table 9 to 40 CFR 63.1103(g), free cyanide is to be measured according to ASTM D4282-15 (Standard Test Method for Determination of Free Cyanide in Water and Wastewater by Microdiffusion) or ASTM D7237 (Standard Test Method for Free Cyanide and Aquatic Free Cyanide with Flow Injection Analysis (FIA) Utilizing Gas Diffusion Separation and

Amperometric Detection). Under 40 CFR 63.144(b)(1) of subpart G, Fm adjustment factors are allowed under specified circumstances (e.g., when concentration is determined by Method 305 as specified in 40 CFR 63.144(b)(5)(i)(B), concentration may be adjusted by dividing by the compound-specific Fm). For free cyanide measured according to ASTM D4282-15 or ASTM D7237 (as required under the final rule), the EPA is not including an Fm adjustment factor option.

In addition to the compliance option available under 40 CFR 63.138(e)(2) of the rule that requires an Fr value to demonstrate compliance, an owner or operator has other compliance options that do not require an Fr value. However, the EPA acknowledges that existing sources complying with 40 CFR part 63 subpart G wastewater provisions may already be complying with wastewater requirements under the 40 CFR part 63 subpart G wastewater provisions that require an Fr value for individual HAP in order to demonstrate compliance. To allow flexibility to owners and operators in complying with the process wastewater options that we proposed for cyanide chemicals manufacturing existing sources under 40 CFR 63.138(a)(1), the final rule has added that, for compliance options and calculations requiring an Fr value under 40 CFR 63.138(a)(1), an owner or operator may use a value of 0.93 for free cyanide (see Table 9 to 40 CFR 63.1103(g), line entry (g) of the final rule). This value is based on the requirement that new sources meet an emissions control level of 93 percent for process wastewater streams.

c. Hydrogen Cyanide/Cyanide Compound Test Methods to Measure Wastewater Stream Concentration

Comment: One commenter stated that the HON regulation includes a number of options for determining the concentration of the regulated organic HAP compounds in a process wastewater stream. The commenter provided that the existing 40 CFR 63.144(b)(5)(i) of the HON regulation does not have a listed test method for hydrogen cyanide or cyanide compounds. The commenter recommended that the EPA include any approved test methods in

Table 1B of 40 CFR 136.3 in the final Cyanide Chemicals manufacturing rule (subpart YY) for these measurements that the regulated entity can use if they opt to make measurements.

The commenter also requested that EPA include any updates to the test method(s) automatically in the rule as an option for the regulated entities to use. The commenter suggested that, if EPA Method 335.4 is updated in the future, the regulated entity should be able to use either EPA Method 335.4 or the updated method.

Response: The EPA has added 40 CFR 63.1103(g)(5)(vi) to include two test methods for measuring the concentration of cyanide in water (ASTM 4282-15 and ASTM 7237-18). The test methods in the table submitted by the commenter were not included because they corresponded to parameters that were irrelevant (total cyanide concentration and available cyanide concentration) or were, subsequent to the submission of the comment, supplanted by a new version of the method in Table 1B. Available cyanide refers to cyanide that is loosely bound in metal-ion complexes, and total cyanide refers to the sum of available and free cyanide. Free cyanide is toxic and bioavailable cyanide, and this is the form of cyanide that the EPA intends to limit. Table 1B of 40 CFR 136.3 was updated July 19, 2021 (86 FR 27226) to incorporate updated versions of the free cyanide methods. The updated versions of the two ASTM methods for free cyanide are included in the final rule, but the OI Analytical method was excluded, as the method text actually describes how to measure available cyanide and does not include information on the modifications necessary to test for free cyanide. EPA Method 335.4 was not included as this method is only available in draft and has not yet been finalized.

d. Request for Clarifications

Comment: One commenter requested that the EPA clarify the text in the proposed paragraph (g) of Table 9 of the proposed 40 CFR part 63 subpart YY regulation to confirm that the provisions apply to each individual wastewater stream.

Response: The EPA has revised line entries (g)(1) and (g)(2) (for existing sources) of Table 9 to 63.1103(g) in the final rule as recommended by the commenter to clarify the EPA's intent that the wastewater requirements apply to each individual wastewater stream.

Comment: One commenter recommended that the EPA clarify that the term "cyanide compounds" is the same as "cyanide chemicals product".

Response: The EPA has added a definition for the term "free cyanide" in 40 CFR 63.1103(g)(2) to clarify the EPA's intent that hydrogen cyanide and cyanide ion (both of which may be present in wastewater due to dissolution of cyanide salts) are the cyanide chemical compounds subject to the Cyanide Chemicals Manufacturing source category wastewater provisions.

4. What is the rationale for our final changes to proposed wastewater provision amendments?

We evaluated the comments on the EPA's proposed process wastewater amendments for existing and new sources. For the reasons explained in the proposed rule (86 FR 3906, 3920-3921), we determined that the process wastewater amendments for existing and new sources are necessary to ensure all affected sources in the cyanide chemicals manufacturing source category are subject to MACT standards, and that the requirements for waste management units upstream of an open or closed biological treatment process for new sources are necessary to ensure demonstrable compliance measures are in place for these sources. More information concerning the amendments we are finalizing is in the preamble to the proposed rule and in our specific responses to the comments above (section V.D.3). Therefore, we are finalizing the wastewater amendments as proposed, with minor clarifications (see section V.D.3.b-e).

VI. Summary of Cost, Environmental, and Economic Impacts and Additional Analyses Conducted

A summary of cost, environmental, and economic impacts is presented in section VI.A for the Carbon Black Production NESHAP and section VI.B for Cyanide Chemicals Manufacturing NESHAP final rule amendments.

A. Carbon Black Production

1. What are the affected facilities?

The EPA estimates that there are 15 production facilities in the Carbon Black Production major source category that are subject to the Carbon Black Production NESHAP and affected by the final amendments to 40 CFR part 63, subpart YY. The basis of our estimates of affected facilities is provided in the memorandum, *Identification of Major Sources for the Carbon Black Production NESHAP*, which is available in the docket for this action (see Docket ID No. EPA-HQ-OAR-2020-0505-0022). We are not currently aware of any planned or potential new or reconstructed carbon black production facilities in the source category. No carbon black production area sources were identified; therefore, there are no area sources subject to this rulemaking.

2. What are the air quality impacts?

While we are broadening the scope of the current Carbon Black Production standard, setting annual tune-up requirements for process heaters and boilers, removing the SSM exemption, and establishing a work practice standard for periods of startup and shutdown, we do not have data to determine quantitatively the reduction in HAP emissions resulting from this action. Through discussions with industry members, it is our understanding that process vents located after the MUF are likely already below the applicability threshold where additional controls will be required. The other requirements we are adding are based on current industry practices. For this reason, we do not anticipate that this action will result in significant HAP emission reductions.

3. What are the cost impacts?

Costs were developed on a per facility basis for Carbon Black Production facilities, and all facilities were determined to have similar costs. Costs are presented in 2019 dollars. Costs were broken into three separate categories based on final requirements: Initial Applicability Test, Performance Test, and Boiler/Process Heater Maintenance Costs.

Initial applicability testing costs include costs associated with the final requirements for process vents located after the MUF to meet the standard, which will require facilities to determine whether emissions control is needed for process vents after the MUF process vent. We estimate this to be a one-time cost of \$21,350 per facility, due to the assumption that the majority of HAP is removed and controlled at the MUF, which likely results in the vent stream concentration located after the MUF falling below the HAP applicability concentration threshold (260 ppmv).

Performance test costs include costs associated with the requirement to conduct emissions tests at the subject process vents every 5 years starting in the first year after promulgation. Based on our understanding of industry practices and emissions profiles, we do not expect any process vents located after the MUF to exceed the applicability threshold, which would require them to conduct performance tests. Facilities must conduct performance tests no more than 60 months after the preceding test when demonstrating compliance with process vent emission control requirements. We estimate that 20 percent of subject facilities will conduct a performance test each year resulting in an annual cost of \$15,241 per facility.

Boiler/process heater maintenance costs include costs associated with the final requirement to ensure that boilers and process heaters are operating at peak efficiency and not creating excess emissions through inefficient operation. Initial tune-up costs are assumed to be higher to get the units back to peak efficiency. We assume that subsequent year costs would be lower because less maintenance would be needed. As such, we estimate the initial tune-up cost to be \$6,750 per facility and subsequent annual tune-ups to cost \$1,350 per facility.

Costs were based primarily on labor, equipment, and travel costs. Labor costs are based on Bureau of Labor Statistics data for relevant employees necessary to perform the tests and maintenance. A detailed cost analysis can be found in the memorandum, *Carbon Black Cost Memorandum*, available in the docket for this action (see Docket ID No. EPA-HQ-OAR-2020-0505-0007).

4. What are the economic impacts?

Economic impact analyses focus on changes in market prices and output levels. If changes in market prices and output levels in the primary markets are significant enough, impacts on other markets may also be examined. Both the magnitude of costs associated with the final requirements and the distribution of these costs among affected facilities can have a role in determining how the market will change in response to a final rule. Economic costs to carbon black producers were measured in Present Value (PV) total costs and Equivalent Annual Value (EAV) costs. All producer facilities were estimated to have similar costs. All costs are presented in 2019 dollars. Refer to the memorandum, *Carbon Black Economic Impact Analysis*, in the docket for this rulemaking for more information (see Docket ID No. EPA-HQ-OAR-2020-0505-0008). PV total costs and EAV costs were measured at the 3-percent and 7-percent discount rate. The duration of analysis was 10 years which represented two full cycles of cost analysis for the final requirements. Per facility PV total costs were estimated to be \$70,000 and \$63,000 at the 3-percent and 7-percent discount rates, respectively. EAV costs per facility were estimated to be \$8,000 and \$9,000 at the 3-percent and 7-percent discount rates, respectively. The combined PV total cost of the final requirements for all facilities was estimated to be \$1,005,000 and \$945,000 at the 3-percent and 7-percent discount rates, respectively. The combined EAV cost of the final requirements for all facilities was estimated to be \$118,000 and \$135,000 at the 3-percent and 7-percent discount rates, respectively. No carbon black production facilities subject to this rule are small businesses based on Small Business Administration standards. Because the PV and EAV costs associated with the final revisions are minimal, no significant economic impacts from the

final amendments are anticipated. Refer to the *Carbon Black Economic Impact Memorandum*, available in the docket (see Docket ID No. EPA-HQ-OAR-2020-0505-0008), for more information.

5. What are the benefits?

As discussed in section VI.A.2 of this preamble, we do not anticipate the finalized amendments to the Carbon Black Production source category to significantly impact air quality. The electronic submittal of the reports addressed in this rulemaking will increase the usefulness of the data contained in those reports; is in keeping with current trends in data availability and transparency; will further assist in the protection of public health and the environment; will improve compliance by facilitating the ability of regulated facilities to demonstrate compliance with requirements; will improve compliance by facilitating the ability of delegated state, local, tribal, and territorial air agencies and the EPA to assess and determine compliance; and will ultimately reduce burden on regulated facilities, delegated air agencies, and the EPA. Electronic reporting also eliminates paper-based, manual processes, thereby saving time and resources, simplifying data entry, eliminating redundancies, minimizing data reporting errors, and providing data quickly and accurately to the affected facilities, air agencies, the EPA, and the public.

Although the EPA does not anticipate any significant reductions in HAP emissions as a result of the final amendments to the Carbon Black Production NESHAP, we believe that the final action will result in improvements to the rule by broadening the current emission limit, requiring an annual tune-up for boilers and process heaters, and revising the SSM standards such that a standard applies at all times, including periods covered by the final work practice standard. Additionally, the final amendments requiring electronic submittal of NOCS reports, performance test results, and periodic reports will increase the usefulness of the data, are in keeping with current trends of data availability, will further assist in the protection of public health and the environment, and will ultimately result in reduced reporting burden on the regulated community.

6. What analysis of environmental justice did we conduct?

Executive Order 12898 directs the EPA staff to identify the populations of concern who are most likely to experience unequal burdens from environmental harms; specifically, minority populations, low-income populations, and indigenous peoples (59 FR 7629, February 16, 1994). Additionally, Executive Order 13985 was signed to advance racial equity and support underserved communities through federal government actions (86 FR 7009, January 20, 2021). The EPA defines environmental justice (EJ) as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. The EPA further defines the term fair treatment to mean that “no group of people should bear a disproportionate burden of environmental harms and risks, including those resulting from the negative environmental consequences of industrial, governmental, and commercial operations or programs and policies” (<https://www.epa.gov/environmentaljustice>). In recognizing that minority and low-income populations often bear an unequal burden of environmental harms and risks, the EPA continues to consider ways of protecting them from adverse public health and environmental effects of air pollution.

To examine the potential for any EJ issues that might be associated with the source category, we performed a demographic analysis, which is an assessment of risks to individual demographic groups of the populations living within 5 km and within 50 km of the facilities. In the analysis, we also evaluated the distribution of HAP-related cancer and noncancer risks from the Carbon Black Production major source category across different demographic groups within the populations living near facilities. The demographic analysis and the risk analysis are contained in the docket and were summarized in the proposed rule preamble.

When examining the risk levels of those exposed to emissions from carbon black production facilities, we find that no one is exposed to a cancer risk at or above 1-in-1 million or to a chronic noncancer TOSHI greater than 1.

Results of the demographic analysis indicate that, of the total population residing within 5km of facilities in the source category, the percentages of people who are African American, age greater than or equal to 65, age greater than or equal to 25 years of age without a high school diploma, and below the poverty level are greater than the national average percentages of people in those demographic groups. The EPA also provided demographic results for populations residing within 50km.

Based on analyses of exposed populations, the EPA determined that this action is unlikely to pose a disproportionately high adverse health impact on minority populations and/or low-income populations, as specified in Executive Order 12898 (59 FR 7629, February 16, 1994) and referenced in Executive Order 13985 (86 FR 7009, January 20, 2021).

The methodology and the results of the demographic analysis are presented in a technical report, *Risk and Technology Review—Analysis of Demographic Factors for Populations Living Near Carbon Black Production Source Category Operations*, available in the docket for the Carbon Black Production source category NESHAP (see Docket Item No. EPA-HQ-OAR-2020-0505-0014).

7. What analysis of children's environmental health did we conduct?

This action is not subject to Executive Order 13045 because it is not economically significant as defined in Executive Order 12866 and because the EPA does not believe the environmental health or safety risks addressed by this action present a disproportionate risk to children. This action's health and risk assessment are documented in the risk report, *Residual Risk Assessment for the Carbon Black Production Source Category in Support of the Risk and Technology Review 2021 Final Rule*, available in the docket for the Carbon Black Production source category NESHAP (see Docket No. EPA-HQ-OAR-2020-0505).

B. Cyanide Chemicals Manufacturing

1. What are the affected facilities?

There are 13 cyanide chemicals manufacturing facilities currently operating as major sources of HAP subject to the final amendments. A list of facilities that are currently subject to the MACT standards is available in the memorandum titled *Technical Support Document for the Cyanide Chemicals Manufacturing NESHAP Residual Risk and Technology Review Proposal*, available in the docket for this action (see Docket ID No. EPA-HQ-OAR-2020-0532-0025).

2. What are the air quality impacts?

The final amendments add wastewater requirements to the Cyanide Chemicals Manufacturing NESHAP, however the EPA does not anticipate that the amendments to the cyanide chemicals manufacturing NESHAP will impact air quality. We are not proposing changes to the standard that will result in additional emission reductions beyond the levels already achieved by the NESHAP.

3. What are the cost impacts?

The final amendments will have a limited cost impact on affected cyanide chemicals manufacturing facilities. Total estimated costs are \$47,527, based on a \$3,656 per facility cost for all 13 facilities. The costs result from reading and understanding rule requirements and adjusting compliance plans based on the rule proposal. All costs other than wastewater testing are one-time expenses expected to occur in the first year after the rule is finalized. Costs are based on Agency knowledge and experience with the NESHAP program, related Information Collection Requests (ICRs), and Bureau of Labor Statistics data.

4. What are the economic impacts for Cyanide Chemicals Manufacturing?

Economic impact analyses focus on changes in market prices and output levels. If changes in market prices and output levels in the primary markets are significant enough, impacts on other markets may also be examined. Both the magnitude of costs associated with the

final requirements and the distribution of these costs among affected facilities can have a role in determining how the market will change in response to a rule.

Economic costs to owners of Cyanide Chemicals Manufacturing facilities were measured in PV total costs and EAV costs. All Cyanide Chemicals Manufacturing facilities were estimated to have similar costs. All costs are presented in 2019 dollars.

PV total costs and EAV costs were measured at the 3 percent and 7 percent discount rates. The duration of analysis was 8 years. Per facility PV total cost estimate is \$3,968 at 3 percent and \$3,925 at 7 percent discount rates. EAV costs per facility are measured to be \$565 and \$657 at the 3 percent and 7 percent discount rates, respectively. Combined total PV cost of the final requirements for all facilities is measured to be \$51,577 at 3 percent and \$51,030 at 7 percent discount rates. Combined EAV costs of the final requirements for all facilities are measured to be \$7,346 and \$8,546 at the 3 percent and 7 percent discount rates, respectively.

As required by the Regulatory Flexibility Act (RFA), we performed an analysis to determine if any small entities would be unduly burdened by the final amendments. No cyanide chemicals manufacturers are small businesses based on Small Business Administration standards. No significant economic impacts from the final amendments are anticipated because the PV and EAV costs associated with the final revisions are minimal.

5. What are the benefits?

As discussed in section VI.B.2 of this preamble, we do not anticipate the finalized amendments to the NESHAP for the Cyanide Chemicals Manufacturing source category to impact air quality. The electronic submittal of the reports addressed in this rulemaking will increase the usefulness of the data contained in those reports, is in keeping with current trends in data availability and transparency, will further assist in the protection of public health and the environment, will improve compliance by facilitating the ability of regulated facilities to demonstrate compliance with requirements and, by facilitating the ability of delegated state, local, tribal, and territorial air agencies and the EPA to assess and determine compliance, will

ultimately reduce burden on regulated facilities, delegated air agencies, and the EPA. Electronic reporting also eliminates paper-based, manual processes, thereby saving time and resources, simplifying data entry, eliminating redundancies, minimizing data reporting errors, and providing data quickly and accurately to the affected facilities, air agencies, the EPA, and the public.

6. What analysis of environmental justice did we conduct?

Executive Order 12898 (59 FR 7629, February 16, 1994) directs federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations. Additionally, Executive Order 13985 was signed to advance racial equity and support underserved communities through federal government actions (86 FR 7009, January 20, 2021). The EPA defines EJ as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. The EPA further defines the term fair treatment to mean that “no group of people should bear a disproportionate burden of environmental harms and risks, including those resulting from the negative environmental consequences of industrial, governmental, and commercial operations or programs and policies” (<https://www.epa.gov/environmentaljustice>). In recognizing that minority and low-income populations often bear an unequal burden of environmental harms and risks, the EPA continues to consider ways of protecting them from adverse public health and environmental effects of air pollution.

To examine the potential for any EJ issues that might be associated with the source category, we performed a demographic analysis, which is an assessment of risks to individual demographic groups of the populations living within 5 km and within 50 km of the facilities. In the analysis, we also evaluated the distribution of HAP-related cancer and noncancer risks from

the Cyanide Chemicals Manufacturing major source category across different demographic groups within the populations living near facilities. The demographic analysis and the risk analysis are contained in the docket and were summarized in the proposed rule preamble.

When examining the risk levels of those exposed to emissions from cyanide chemical manufacturing facilities, we find that 61,653 people nationwide are exposed to an incremental cancer risk at or above 1-in-1 million with no one exposed to an excess cancer risk greater than 5-in-1 million based upon actual or allowable emissions. Also, no people are exposed to a chronic noncancer TOSHI greater than 1.

Results of the demographic analysis indicate that of the 61,653 people residing within 50 km of facilities in the source category whose risk is at or above 1-in-1 million (but less than 5-in-1 million) as a result of emissions from the source category, the percent of individuals in three demographic groups, African American, below poverty level, and greater than or equal to 25 years of age without a high school diploma, are greater than the corresponding national average percentage of people in those demographic groups. Specifically, the population with risks greater than 1-in-1 million live in areas where 19 percent of the population is African American compared to 12 percent nationally, 23 percent are below the poverty level¹⁵ compared to 14 percent nationally, and 16 percent are greater than or equal to 25 years of age without a high school diploma compared to 14 percent nationally. Because the final amendments to the rule are not anticipated to result in emissions reductions, implementation of the final rule will not result in a significant increase or decrease in any existing risk disparities for the demographic groups.

Based on the analyses of exposed populations described above, the EPA determined that this action is unlikely to pose a disproportionately high and adverse health impact on minority populations and/or low-income populations, as specified in Executive Order 12898 (59 FR 7629, February 16, 1994) and referenced in Executive Order 13985 (86 FR 7009, January 20, 2021).

¹⁵ Table 2 of the proposed rule preamble erroneously listed this percentage as 16 percent rather than 23 percent.

The methodology and the results of the demographic analysis are presented in a technical report, *Risk and Technology Review—Analysis of Demographic Factors for Populations Living Near Cyanide Chemicals Manufacturing Source Category Operations*, available in the docket for this action; (see Docket Item No. EPA-HQ-OAR-2020-0532-0006).

7. What analysis of children’s environmental health did we conduct?

This action is not subject to Executive Order 13045 because it is not economically significant as defined in Executive Order 12866, and because the EPA does not believe the environmental health or safety risks addressed by this action present a disproportionate risk to children. This action's health and risk assessment are documented in the risk report, *Residual Risk Assessment for the Cyanide Chemicals Manufacturing Source Category in Support of the Risk and Technology Review 2021 Final Rule*, available in the docket for the Cyanide Chemicals Manufacturing source category rule (see Docket No. EPA-HQ-OAR-2020-0532).

VII. Statutory and Executive Order Reviews

Additional information about these statutes and Executive Orders can be found at <https://www.epa.gov/laws-regulations/laws-and-executive-orders>.

A. Executive Orders 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

This action is not a significant regulatory action and was, therefore, not submitted to OMB for review.

B. Paperwork Reduction Act (PRA)

Section VII.B.1 presents PRA considerations related to the Carbon Black Production NESHAP, and section VII.B.2 presents the PRA considerations related to the Cyanide Chemicals Manufacturing NESHAP.

1. Carbon Black Production

The information collection activities in the final rule for the Carbon Black Production source category have been submitted for approval to the OMB under the PRA. The ICR

document that the EPA prepared has been assigned EPA ICR number 2677.02. A copy of the ICR is available in the docket for the Carbon Black Production source category NESHAP (see Docket No. EPA-HQ-OAR-2020-0505), and is briefly summarized here. We are finalizing changes to the recordkeeping and reporting requirements associated with 40 CFR part 63, subpart YY, in the form of eliminating the SSM plan and reporting requirements; broadening the initial emission limit to include process vents located after the MUF; and including the requirement for electronic submittal of reports. In addition, the number of facilities subject to the standards changed. The number of respondents was reduced from 18 to 15 based on consultation with industry representatives and state and local agencies.

Respondents/affected entities: The respondents to the recordkeeping and reporting requirements are owners and operators of carbon black production facilities subject to 40 CFR part 63, subpart YY.

Respondent's obligation to respond: Mandatory (40 CFR part 63, subpart YY).

Estimated number of respondents: 15 facilities.

Frequency of response: The frequency of responses varies depending on the burden item. Responses include one-time review of rule amendments, reports of periodic performance tests, and semiannual compliance reports.

Total estimated burden: The annual recordkeeping and reporting burden for responding facilities to comply with all of the requirements in the NESHAP, averaged over the 3 years of this ICR, is estimated to be 289 hours (per year). The average annual burden to the Agency over the 3 years after the amendments are final is estimated to be 213 hours (per year) for the Agency. Burden is defined at 5 CFR 1320.3(b).

Total estimated cost: The annual recordkeeping and reporting cost for responding facilities to comply with all of the requirements in the NESHAP, averaged over the 3 years of this ICR, is estimated to be \$180,928 (per year). There are no estimated capital and operation and maintenance costs. The total average annual Agency cost over the first 3 years after the

amendments are final is estimated to be \$10,247. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for the EPA's regulations in 40 CFR are listed in 40 CFR part 9.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for the EPA's regulations in 40 CFR are listed in 40 CFR part 9. When OMB approves this ICR, the Agency will announce that approval in the *Federal Register* and publish a technical amendment to 40 CFR part 9 to display the OMB control number for the approved information collection activities in this final rule.

2. Cyanide Chemicals Manufacturing

The information collection activities in the final rule have been submitted to the OMB under the PRA. The ICR document that the EPA prepared has been assigned EPA ICR number 2678.02. A copy of the ICR is available in the docket for the Cyanide Chemicals Manufacturing source category NESHAP (see Docket No. EPA-HQ-OAR-2020-0532), and is briefly summarized here.

The EPA is finalizing amendments that revise provisions pertaining to emissions during periods of SSM, add requirements for electronic reporting of NOCS, periodic reports, and performance test results, and make other minor clarifications and corrections. This information will be collected to assure compliance with the Cyanide Chemicals Manufacturing NESHAP. The ICR burdens for these final amendments are summarized below.

Respondents/affected entities: Owners or operators of cyanide chemicals manufacturing facilities.

Respondent's obligation to respond: Mandatory (40 CFR part 63, subpart YY).

Estimated number of respondents: 13 (assumes no new respondents over the next 3 years).

Frequency of response: Initially, occasionally, and annually.

Total estimated burden: 169 hours (per year) to comply with all of the requirements in the NESHAP. Burden is defined at 5 CFR 1320.3(b).

Total estimated cost: \$17,108 (per year). Includes total capital costs of \$1,300 incurred in the first year (\$433 per year over 3 years) for process wastewater stream sampling to determine applicability and compliance with the final rule amendments. There are no annualized operation and maintenance costs to comply with under the final amendments to the NESHAP.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for the EPA's regulations in 40 CFR are listed in 40 CFR part 9. When OMB approves this ICR, the Agency will announce that approval in the *Federal Register* and publish a technical amendment to 40 CFR part 9 to display the OMB control number for the approved information collection activities in this final rule.

C. Regulatory Flexibility Act (RFA)

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA. This action will not impose any requirements on small entities, since there are no small entities in the affected source categories.

D. Unfunded Mandates Reform Act (UMRA)

This action does not contain an unfunded mandate of \$100 million or more as described in UMRA, 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments. The action imposes no enforceable duty on any state, local, or tribal governments or the private sector.

E. Executive Order 13132: Federalism

This action does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government.

F. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments

This action does not have tribal implications as specified in Executive Order 13175. None of the carbon black production or cyanide chemicals manufacturing production facilities that have been identified as being affected by this proposed action are owned or operated by tribal governments. However, we determined that one carbon black facility and two cyanide facilities are located within 50 miles of tribal lands. Consistent with the EPA Policy on Coordination and Consultation with Indian Tribes, the EPA offered tribal leadership the opportunity for government-to-government consultation with no response. In addition, the EPA held multiple outreach activities that included a webinar and participation on tribal partnership calls.

G. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks

This action is not subject to Executive Order 13045 because the EPA does not believe the environmental health risks or safety risks addressed by this action present a disproportionate risk to children.

The health and risk assessments for the Carbon Black Production and Cyanide Chemicals Manufacturing source categories are discussed in sections IV.A and V.A of this preamble. The document, *Residual Risk Assessment for the Carbon Black Production Source Category in Support of the Risk and Technology Review 2021 Final Rule*, is available in the docket for the Carbon Black Production source category (see Docket ID No. EPA-HQ-OAR-2020-0505). The document, *Residual Risk Assessment for the Cyanide Chemicals Manufacturing Source Category in Support of the Risk and Technology Review 2021 Final Rule*, is available in the docket for the

Cyanide Chemicals Manufacturing source category (see Docket ID No. EPA-HQ-OAR-2020-0532).

H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

This action is not subject to Executive Order 13211, because it is not a significant regulatory action under Executive Order 12866.

I. National Technology Transfer and Advancement Act (NTTAA) and 1 CFR part 51

This action does not involve technical standards for the Carbon Black Production source category.

This action does involve technical standards for the Cyanide Chemicals Manufacturing source category. Therefore, the EPA conducted a search to identify potentially applicable voluntary consensus standards (VCS). However, the Agency identified no such standards. A thorough summary of the search and results are included in the memorandum titled *Voluntary Consensus Standard Results for Cyanide Chemicals Manufacturing Residual Risk and Technology Review*, which is available in the docket for this action/source category (see Docket ID No. EPA-HQ-OAR-2020-0532-0004).

In the final rule, the EPA is incorporating by reference the VCS ASTM D4282-15, Standard Test Method for Determination of Free Cyanide in Water and Wastewater by Microdiffusion and ASTM D7237-18, Standard Test Method for Free Cyanide and Aquatic Free Cyanide with Flow Injection Analysis (FIA) Utilizing Gas Diffusion Separation and Amperometric Detection. Both methods are water and wastewater methods for the determination of free cyanide. In ASTM D4282-15, the reactions are carried out in a microdiffusion cell. The sample is treated with cadmium ion to precipitate hexacyanoferrates and buffered to pH 6. The HCN then diffuses into a sodium hydroxide solution which is subsequently treated, and the concentration of free cyanide determined by spectrophotometric analysis. In ASTM-7237-18, the sample is introduced into the carrier solution of the flow injection analysis system with a

phosphate buffer solution at pH 6. The released hydrogen cyanide gas diffuses through a hydrophobic gas diffusion membrane into an alkaline receptor stream where the cyanide ion is captured and sent to an amperometric flowcell detector with a silver-working electrode. In the presence of cyanide, silver in the working electrode is oxidized at the applied potential. The anodic current measured is proportional to the concentration of cyanide in the sample. These methods are reasonably available from ASTM at <https://www.astm.org> or 1100 Barr Harbor Drive, West Conshohocken, PA 19428–2959, telephone number: (610) 832–9500, fax number: (610) 832-9555 email: service@astm.org.

J. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

The EPA believes that this final action for both the Carbon Black Production source category and the Cyanide Chemicals Manufacturing source category does not have disproportionately high and adverse human health or environmental effects on minority populations, low-income populations, and/or indigenous peoples, as specified in Executive Order 12898.

The documentation for this decision for the Carbon Black Production source category is contained in the technical report, *Risk and Technology Review—Analysis of Demographic Factors for Populations Living Near Carbon Black Production Facilities*, available in the docket for this action (see Docket ID No. EPA-HQ-OAR-2020-0505-0014) and discussed in Section VI.A.6 of this final rule.

The documentation for this decision for the Cyanide Chemicals Manufacturing is contained in the technical report, *Risk and Technology Review—Analysis of Demographic Factors for Populations Living Near Cyanide Chemicals Manufacturing Facilities*, available in the docket for this action (see Docket ID No. EPA-HQ-OAR-2020-0532-0006) and discussed in Section VI.B.6 of this final rule.

The EPA provided opportunities to engage with the EPA on these proposals. The Agency offered a public hearing and also reached out to communities in other ways, including a webinar held on February 10, 2021, to exchange information with stakeholders about these proposals. We did not receive any requests for a public hearing and we did not receive feedback regarding EJ during the webinar. The EPA remains committed to engaging with communities and stakeholders throughout the development of air pollution regulations.

K. Congressional Review Act (CRA)

This action is subject to the CRA, and the EPA will submit a rule report for this action to each House of the Congress and to the Comptroller General of the United States. Neither of the NESHAP amended by this action constitute a “major rule” as defined by 5 U.S.C. 804(2).

List of Subjects in 40 CFR Part 63

Environmental protection, Administrative practice and procedures, Air pollution control, Hazardous substances, Incorporation by reference, Intergovernmental relations, Reporting and recordkeeping requirements.

Michael S. Regan,

Administrator.

For the reasons stated in the preamble, the Environmental Protection Agency is amending part 63 of title 40, chapter I, of the Code of Federal Regulations as follows:

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

1. The authority citation for part 63 continues to read as follows:

Authority: 42 U.S.C. 7401 *et seq.*

Subpart A—General Provisions

2. Section 63.14 is amended by:

- a. Redesignating paragraphs (h)(105) through (h)(117) as (h)(107) through (h)(119);
- b. Redesignating paragraphs (h)(63) through (h)(104) as (h)(64) through (h)(105);
- c. Adding new paragraphs (h)(63) and (h)(106);

The additions read as follows:

§63.14 Incorporations by reference.

* * * * *

(h) * * *

(63) ASTM D4282-15, Standard Test Method for Determination of Free Cyanide in Water and Wastewater by Microdiffusion, Approved July 15, 2015, IBR approved for §63.1103(g).

* * * * *

(106) ASTM D7237-18, Standard Test Method for Free Cyanide and Aquatic Free Cyanide with Flow Injection Analysis (FIA) Utilizing Gas Diffusion Separation and Amperometric Detection, Approved December 1, 2018, IBR approved for §63.1103(g).

* * * * *

Subpart YY—National Emission Standards for Hazardous Air Pollutants for Source Categories: Generic Maximum Achievable Control Technology Standards

3. Section 63.1101 is amended by revising the definition for “Process vent” to read as follows:

§63.1101 Definitions.

* * * * *

Process vent means the point of discharge to the atmosphere (or the point of entry into a control device, if any) of a gas stream from a unit operation within a source category subject to this subpart. Process vent excludes the following gas stream discharges:

- (1) Relief valve discharges;
- (2) Leaks from equipment subject to this subpart;
- (3) Gas streams exiting a control device complying with this subpart;
- (4) Gas streams transferred to other processes (on-site or off-site) for reaction or other use in another process (i.e., for chemical value as a product, isolated intermediate, byproduct, or co-product for heat value);
- (5) Gas streams transferred for fuel value (*i.e.*, net positive heating value), use, reuse, or sale for fuel value, use, or reuse. On or after **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]** this exclusion no longer applies to the Carbon Black Production source category;
- (6) Gas streams from storage vessels or transfer racks subject to this subpart;
- (7) Gas streams from waste management units subject to this subpart;
- (8) Gas streams from wastewater streams subject to this subpart;
- (9) Gas streams exiting process analyzers; and
- (10) Gas stream discharges that contain less than or equal to 0.005 weight-percent total organic HAP.

* * * * *

4. Section 63.1102 is amended by revising paragraph (a) introductory text and adding paragraphs (d) and (e) to read as follows:

§63.1102 Compliance schedule.

(a) *General requirements.* Affected sources, as defined in §63.1103(a)(1)(i) for acetyl resins production, §63.1103(b)(1)(i) for acrylic and modacrylic fiber production,

§63.1103(c)(1)(i) for hydrogen fluoride production, §63.1103(d)(1)(i) for polycarbonate production, §63.1103(e)(1)(i) for ethylene production, §63.1103(f)(1)(i) for carbon black production, §63.1103(g)(1)(i) for cyanide chemicals manufacturing, or §63.1103(h)(1)(i) for spandex production shall comply with the appropriate provisions of this subpart and the subparts referenced by this subpart YY according to the schedule in paragraph (a)(1) or (2) of this section, as appropriate, except as provided in paragraph (b) of this section. Affected sources in ethylene production also must comply according to paragraph (c) of this section. Affected sources in cyanide chemicals manufacturing also must comply according to paragraph (d) of this section. Affected sources in carbon black production also must comply according to paragraph (e) of this section. Proposal and effective dates are specified in table 1 to this section and in paragraph (d) for cyanide chemicals manufacturing affected sources and paragraph (e) for carbon black production affected sources of this section.

* * * * *

(d) *Cyanide chemicals manufacturing.* (1) If applicable, all cyanide chemicals manufacturing affected sources that commenced construction or reconstruction on or before January 15, 2021, must be in compliance with the requirements listed in paragraphs (d)(1)(i) and (ii) of this section upon initial startup or November 20, 2022, whichever is later. If applicable, all cyanide chemicals manufacturing affected sources that commenced construction or reconstruction after January 15, 2021, must be in compliance with the requirements listed in paragraphs (d)(1)(i) and (ii) of this section upon initial startup, or **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, whichever is later.

(i) Requirements specified in Table 9 to §63.1103(g), table entry (f)(1)(ii), for new cyanide chemicals manufacturing process units that generate process wastewater.

(ii) Requirements specified in Table 9 to §63.1103(g), table entry (g), for existing cyanide chemicals manufacturing process units that generate process wastewater.

(2) All cyanide chemicals manufacturing affected sources that commenced construction or reconstruction on or before January 15, 2021, must be in compliance with the requirements listed in paragraphs (d)(2)(i) through (iii) of this section upon initial startup or **[INSERT DATE 180 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, whichever is later. All cyanide chemicals manufacturing affected sources that commenced construction or reconstruction after January 15, 2021, must be in compliance with the requirements listed in paragraphs (d)(2)(i) through (iii) of this section upon initial startup, or **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, whichever is later.

(i) The exceptions specified in §63.1103(g)(6) related to 40 part 63, subparts SS, TT, and UU startup, shutdown, and malfunction requirements.

(ii) The compliance requirements specified in §63.1108(a)(4)(i), (b)(1)(ii), (b)(2), and (b)(4)(ii)(B).

(iii) The electronic reporting requirements specified in §63.1110(a)(10).

(e) *Carbon black production.* (1) If applicable, all carbon black production affected sources that commenced construction or reconstruction on or before January 14, 2021, must be in compliance with the requirements listed in paragraphs (e)(1)(i) through (iii) of this section upon initial startup or November 20, 2022, whichever is later. If applicable, all carbon black production affected sources that commenced construction or reconstruction after January 14, 2021, must be in compliance with the requirements listed in paragraphs (e)(1)(i) through (iii) of this section upon initial startup, or **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, whichever is later.

(i) The process vent applicability determination requirements specified in §63.1103(f)(3)(iv).

(ii) The performance test frequency requirements specified in §63.1108(b)(4)(ii).

(iii) The boiler and process heater tune up requirements specified in §63.1103(f)(3)(iii).

(2) All carbon black production affected sources that commenced construction or reconstruction on or before January 14, 2021, must be in compliance with the requirements listed in paragraphs (e)(2)(i) through (iv) of this section upon initial startup **or [INSERT DATE 180 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, whichever is later. All carbon black production affected sources that commenced construction or reconstruction after January 14, 2021, must be in compliance with the requirements listed in paragraphs (e)(2)(i) through (iv) of this section upon initial startup, or **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, whichever is later.

(i) The exceptions specified in §63.1103(f)(4) related to 40 part 63, subpart SS, startup, shutdown, and malfunction requirements.

(ii) The exception specified in §63.1103(f)(5) related to the requirement that a closed vent system route the collected vapors to a control device when demonstrating compliance.

(iii) The compliance requirements specified in §63.1108(a)(4)(i), (b)(1)(ii), (b)(2), and (b)(4)(ii)(B).

(iv) The electronic reporting requirements specified in §63.1110(a)(10).

(3) All carbon black production affected sources that commenced construction or reconstruction on or before January 14, 2021, must be in compliance with the requirements specified in line entry (b) in Table 8 to §63.1103(f) on or before November 19, 2024. All carbon black production affected sources that commenced construction or reconstruction after January 14, 2021, must be in compliance with the requirements specified in line entries (b) and (c) in Table 8 to §63.1103(f) upon initial startup or **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, whichever is later.

5. Section 63.1103 is amended by:

a. Revising paragraph (f)(3)(i) and adding paragraphs (f)(3)(iii) through (v).

b. Adding entries (b) and (c) to table 8 to §63.1103(f).

c. Adding paragraphs (f)(4) and (5).

- d. Revising paragraph (g)(1)(ii).
- e. In paragraph (g)(2) adding the definition for “free cyanide” in alphabetical order.
- f. Revising paragraph (g)(3).
- g. Adding paragraph (g)(5)(vi).
- h. Adding paragraph (g)(6).
- i. In table 9 to §63.1103(g), revising entries (f) through (i) and adding entry (j).

The additions and revisions read as follows:

§63.1103 Source category-specific applicability, definitions, and requirements.

*	*	*	*	*
(f)	*	*	*	*
(3)	*	*	*	*

(i) Table 8 to this section specifies the carbon black production standards applicability for existing and new sources. Applicability assessment procedures and methods are specified in §63.1104. An owner or operator of an affected source is not required to perform applicability tests or other applicability assessment procedures if they opt to comply with the most stringent requirements for an applicable emission point pursuant to this subpart. General compliance, recordkeeping, and reporting requirements are specified in §§63.1108 through 63.1112. Before **[INSERT DATE 180 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, minimization of emissions from startup, shutdown, and malfunctions must be addressed in the startup, shutdown, and malfunction plan required by §63.1111; the plan must also establish reporting and recordkeeping of such events. A startup, shutdown, and malfunction plan is not required on and after **[INSERT DATE 180 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]** and the requirements specified in §63.1111 no longer apply; however, for historical compliance purposes, a copy of the plan must be retained and available on-site for 5 years after **[INSERT DATE 180 DAYS**

AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]. Procedures for approval of alternative means of emission limitations are specified in §63.1113.

* * * * *

(iii) The boiler and process heater tune up requirements of paragraphs (f)(3)(iii)(A) through (F) of this section apply beginning no later than the compliance dates specified in §63.1102(e) for carbon black production affected sources and as specified in Table 8 to §63.1103(f), line entry (c).

(A) Inspect the combustion device for damage, wear, and buildup of material that could impact effectiveness, and clean or replace any components of the burner as necessary. Units that produce electricity for sale may delay the combustion device inspection until the first outage after the annual inspection is required, not to exceed 36 months from the previous inspection. At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries into the storage vessel or process equipment;

(B) When possible based upon the configuration of the burner, inspect the flame pattern and adjust the burner if needed to optimize the flame pattern. If manufacturer's specifications for an optimized flame pattern are available, the adjustment should be consistent with the manufacturer's specifications;

(C) Inspect the system controlling the air-to-fuel ratio, and ensure that it is functioning properly. For any calibrated components ensure that it is correctly calibrated The annual inspection may be delayed until the next scheduled unit shutdown. Units that produce electricity for sale may delay the inspection until the first outage after the annual inspection is required, not to exceed 36 months from the previous inspection;

(D) Optimize total emissions of CO. If manufacturer's specifications for optimization are available, this optimization should be consistent with the manufacturer's specifications and with any NO_x requirement to which the unit is subject. If no manufacturer's specifications are

available, the inspection and cleaning procedures of paragraph (f)(3)(iii)(A) fulfill the obligations of this paragraph;

(E) Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made.

Measurements may be taken using a portable CO analyzer and may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made. If adjustments are not or cannot be made, make the measurements before and after the inspection and cleaning procedures specified in paragraph (f)(3)(iii)(A); and

(F) Maintain on-site and submit, if requested by the Administrator, a report containing the information in paragraphs (f)(3)(iii)(F)(1) through (3) of this section,

(1) The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater;

(2) A description of any corrective actions taken as a part of the tune-up; and

(3) The type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel used by each unit.

(iv) When determining the applicability of the carbon black production process vent requirements specified in line entry (b) to Table 8 to §63.1103(f), an owner or operator is required to determine the HAP concentration of the process vent streams, at a minimum, as specified in paragraphs (f)(3)(iv)(A) through (D) of this section.

(A) As an alternative to testing all carbon black production process carbon black or product vent streams after the main unit filter to determine applicability, an owner or operator has the option of testing the first carbon black production process or product vent stream after the main unit filter. If the concentration of the emission stream is less than 260 parts per million by volume as determined by the process vent applicability determination requirements specified

in §63.1103(f)(3)(iv), then all process vents after the main unit filter and before the dryer are deemed to be in compliance and are not subject to the emission limits in Table 8 below.

(B) As an alternative to testing all carbon black production process carbon black or product vent streams after the dryer to determine applicability, an owner or operator has the option of testing the first carbon black production process carbon black or product vent stream after the dryer. If the concentration of the emission stream is less than 260 parts per million by volume as determined by the process vent applicability determination requirements specified in §63.1103(f)(3)(iv), then all process vents after the dryer are deemed to be in compliance and are not subject to the emission limits in Table 8 below.

(C) Report the results of the applicability assessment according to paragraph §63.1110(a)(10)(i).

(D) A test meeting the requirements of §63.1104(e) conducted after November 18, 2016 and where no process changes have occurred since the test that may affect emissions, may be submitted according to §63.1110(a)(10)(i)(A) through (C) in lieu of performing a new applicability determination.

(v) When determining the applicability of the carbon black production main unit filter process vent requirements specified in line entry (a) to Table 8 to §63.1103(f), an owner or operator is required to determine the HAP concentration of the main unit filter process vent streams. Beginning **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, report the results of any applicability assessment conducted after **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, the applicability assessment according to paragraph §63.1110(a)(10)(i).

TABLE 8 TO §63.1103(f)—WHAT ARE MY REQUIREMENTS IF I OWN OR OPERATE A CARBON BLACK PRODUCTION EXISTING OR NEW AFFECTED SOURCE?

If you own or operate . . .	And if . . .		Then you must . . .		
*	*	*	*	*	*

(b) A carbon black production process vent not subject to line entry (a) of this table	(1) The HAP concentration of the emission stream is equal to or greater than 260 parts per million by volume ^a as determined by the process vent applicability determination requirements specified in §63.1103(f)(3)(iv).	Beginning no later than the compliance dates specified in §63.1102(e): (i) Reduce emissions of HAP by using a flare meeting the requirements of subpart SS of this part; or (ii) Reduce emissions of total HAP by 98 weight-percent or to a concentration of 20 parts per million by volume, whichever is less stringent, by venting emissions through a closed vent system to any combination of control devices meeting the requirements of §63.982(a)(2).
(c) A carbon black production process vent subject to (a) or (b) above	(1) The process vent complies by routing emissions to a boiler/process heater for use as fuel gas	(i) Beginning no later than the compliance dates specified in §63.1102(e), conduct annual tune up requirements as specified in §63.1103(f)(3)(iii) of this subpart.

^a The weight-percent organic HAP is determined according to the procedures specified in §63.1104(e).

* * * * *

(4) Beginning no later than the compliance dates specified in §63.1102(e), the referenced provisions specified in paragraphs (f)(4)(i) through (xiii) of this section do not apply when demonstrating compliance with paragraph (f)(3) of this section.

(i) The phrase “except during periods of start-up, shutdown and malfunction as specified in the referencing subpart” in §63.984(a) of subpart SS (equipment and operating requirements for fuel gas systems and processes requirements).

(ii) The phrase “except during periods of start-up, shutdown and malfunction as specified in the referencing subpart” in §63.985(a) of subpart SS (nonflare control device equipment and operating requirements).

(iii) The phrase “other than start-ups, shutdowns, or malfunctions” in §63.994(c)(1)(ii)(D) of subpart SS (halogen scrubber and other halogen reduction device monitoring requirements).

(iv) Section 63.996(c)(2)(ii) of subpart SS (operation and maintenance of continuous parameter monitoring systems) “(ii) If under the referencing subpart, an owner or operator has developed a start-up, shutdown, and malfunction plan, the plan is followed, and the CPMS is repaired immediately, this action shall be recorded as specified in §63.998(c)(1)(ii)(E).”

(v) The last sentence of §63.997(e)(1)(i) (performance test procedures) of subpart SS (general procedures for continuous unit operations): “Operations during periods of start-up, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test.”

(vi) Section 63.998(b)(2)(iii) (excluded data) of subpart SS: “(iii) Startups, shutdowns, and malfunctions, if the owner or operator operates the source during such periods in accordance with §63.1111(a) and maintains the records specified in paragraph (d)(3) of this section.”

(vii) The phrase “other than periods of startups, shutdowns, and malfunctions” from §63.998(b)(5)(i)(A) (alternative recordkeeping) of subpart SS.

(viii) The phrase “other than a start-up, shutdown, or malfunction” from §63.998(b)(5)(i)(B)(3) (alternate recordkeeping) of subpart SS.

(ix) The phrase “other than periods of startups, shutdowns, and malfunctions” from §63.998(b)(5)(i)(C) (alternate recordkeeping) of subpart SS.

(x) The phrase “other than a start-up, shutdown, or malfunction” from §63.998(b)(5)(ii)(C) (alternate recordkeeping) of subpart SS.

(xi) The phrase “except as provided in paragraphs (b)(6)(i)(A) and (B) of this section” from §63.998(b)(6)(i) (alternative recordkeeping) of subpart SS.

(xii) The second sentence of §63.998(b)(6)(ii) (alternative recordkeeping) of subpart SS. “If a source has developed a startup, shutdown and malfunction plan, and a monitored parameter is outside its established range or monitoring data are not collected during periods of start-up, shutdown, or malfunction (and the source is operated during such periods in accordance with §63.1111(a)) or during periods of nonoperation of the process unit or portion thereof (resulting in

cessation of the emissions to which monitoring applies), then the excursion is not a violation and, in cases where continuous monitoring is required, the excursion does not count as the excused excursion for determining compliance.”

(xiii) Section 63.998(c)(1)(ii)(D) through (G) (nonflare control and recovery device regulated source monitoring records) of subpart SS.

(xiv) Section 63.998(d)(3) (regulated source and control equipment start-up, shutdown, and malfunction records) of subpart SS.

(5) Beginning no later than the compliance dates specified in §63.1102(e), the provisions specified in §63.983(a)(1) of subpart SS that each closed vent system shall be designed and operated to collect the regulated material vapors from the emission point shall apply at all times, with the following exception: The closed vent system to the control device may be bypassed during startup or shutdown of a reactor when the excess oxygen concentration in the closed vent system is greater than or equal to 3 percent. Startup and shutdown of a reactor must be completed as expeditiously as possible, and in fewer than 15 minutes whenever possible. In no case shall the time period allowed be permitted to exceed 15 minutes. The bypass of the control device must use one of the methods specified in paragraphs (f)(5)(i) through (ii):

(i) *Calculated Purge Duration Method*: Each facility must calculate the purge duration of their closed vent system by evaluating the volume of the closed vent system and the flowrate of the contents of the closed vent system from the reactor to the common tail gas header.

Additionally, each facility must calculate the amount of time it takes to open and/or close the common tail gas header and open and/or close the main unit filter vent to maintain constant pressure. The time required to completely purge the closed vent system is added to the time required to open and close the associated vents along with a safety factor that accounts for the physical and technological constraints of the facility, to determine the total calculated purge duration in minutes.

(ii) *Oxygen Sensors*: Facilities may use oxygen sensors located within the closed vent system to determine when the oxygen level falls below 3 percent.

* * * *

(g) * *

(1) * *

(ii) *Compliance schedule*. The compliance schedule for the affected source, as defined in paragraph (g)(1)(i) of this section, is specified in §63.1102.

(2) * *

Free cyanide means chemical species of cyanide that are dissolved in water and are bioavailable and known for their toxic effects on living organisms. This refers to the sum of molecular hydrogen cyanide (HCN) and cyanide ion (CN⁻) dissolved in water. Included in this definition are the dissolved products of cyanide salts (including potassium cyanide [KCN] and sodium cyanide [NaCN]), as these salts dissociate to cyanide ion and hydrogen cyanide when added to water.

* * * *

(3) *Requirements*. Table 9 to this section specifies the cyanide chemicals manufacturing standards applicable to existing and new sources. Applicability assessment procedures and methods are specified in §63.1104. An owner or operator of an affected source is not required to perform applicability tests or other applicability assessment procedures if they opt to comply with the most stringent requirements for an applicable emission point pursuant to this subpart. General compliance, recordkeeping, and reporting requirements are specified in §§63.1108 through 63.1112. Before **[INSERT DATE 180 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, minimization of emissions from startup, shutdown, and malfunctions must be addressed in the startup, shutdown, and malfunction plan required by §63.1111; the plan must also establish reporting and recordkeeping of such events. A startup, shutdown, and malfunction plan is not required on and after **[INSERT DATE 180 DAYS**

AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER] and the requirements specified in §63.1111 no longer apply; however, for historical compliance purposes, a copy of the plan must be retained and available on-site for 5 years after **[INSERT DATE 180 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. Procedures for approval of alternative means of emission limitations are specified in §63.1113.

* * * *

(5) * *

(vi) For compliance with the wastewater free cyanide analysis provisions of table 9 to §63.1103(g), free cyanide is to be measured according to ASTM D4282-15 or ASTM D7237-18 (both incorporated by reference, see § 63.14).

(6) *Startup, shutdown, and malfunction referenced provisions.* Beginning no later than the compliance dates specified in §63.1102(d), the referenced provisions specified in paragraphs (g)(6)(i) through (xxiii) of this section do not apply when demonstrating compliance with paragraph (g)(3) of this section.

(i) The second/last sentence of §63.983(a)(5) (requirements for pressure relief devices in a transfer rack's closed vent system requirements) of subpart SS: “Pressure relief devices needed for safety purposes are not subject to this paragraph.”

(ii) The phrase “except during periods of start-up, shutdown and malfunction as specified in the referencing subpart” in §63.984(a) of subpart SS (equipment and operating requirements for fuel gas systems and processes requirements).

(iii) The phrase “except during periods of start-up, shutdown and malfunction as specified in the referencing subpart” in §63.985(a) of subpart SS (nonflare control device equipment and operating requirements).

(iv) The phrase “other than start-ups, shutdowns, or malfunctions” in §63.994(c)(1)(ii)(D) of subpart SS (halogen scrubber and other halogen reduction device monitoring requirements).

(v) Section 63.996(c)(2)(ii) of subpart SS (operation and maintenance of continuous parameter monitoring systems) “(ii) If under the referencing subpart, an owner or operator has developed a start-up, shutdown, and malfunction plan, the plan is followed, and the CPMS is repaired immediately, this action shall be recorded as specified in §63.998(c)(1)(ii)(E).”

(vi) The last sentence of §63.997(e)(1)(i) (performance test procedures) of subpart SS (general procedures for continuous unit operations): “Operations during periods of start-up, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test.”

(vii) Section 63.998(b)(2)(iii) (excluded data) of subpart SS: “(iii) Startups, shutdowns, and malfunctions, if the owner or operator operates the source during such periods in accordance with §63.1111(a) and maintains the records specified in paragraph (d)(3) of this section.”

(viii) The phrase “other than periods of startups, shutdowns, and malfunctions” from §63.998(b)(5)(i)(A) (alternative recordkeeping) of subpart SS.

(ix) The phrase “other than a start-up, shutdown, or malfunction” from §63.998(b)(5)(i)(B)(3) (alternate recordkeeping) of subpart SS.

(x) The phrase “other than periods of startups, shutdowns, and malfunctions” from §63.998(b)(5)(i)(C) (alternate recordkeeping) of subpart SS.

(xi) The phrase “other than a start-up, shutdown, or malfunction” from §63.998(b)(5)(ii)(C) (alternate recordkeeping) of subpart SS.

(xii) The phrase “except as provided in paragraphs (b)(6)(i)(A) and (B) of this section” from §63.998(b)(6)(i) (alternative recordkeeping) of subpart SS.

(xiii) The second sentence of §63.998(b)(6)(ii) (alternative recordkeeping) of subpart SS. “If a source has developed a startup, shutdown and malfunction plan, and a monitored parameter is outside its established range or monitoring data are not collected during periods of startup, shutdown, or malfunction (and the source is operated during such periods in accordance with §63.1111(a)) or during periods of nonoperation of the process unit or portion thereof (resulting in

cessation of the emissions to which monitoring applies), then the excursion is not a violation and, in cases where continuous monitoring is required, the excursion does not count as the excused excursion for determining compliance.”

(xiv) Section 63.998(c)(1)(ii)(D) through (G) (nonflare control and recovery device regulated source monitoring records) of subpart SS.

(xv) Section 63.998(d)(3) (regulated source and control equipment start-up, shutdown and malfunction records) of subpart SS.

(xvi) The phrase “may be included as part of the startup, shutdown, and malfunction plan, as required by the referencing subpart for the source, or” from §63.1005(e)(4)(i) (leak repair records written procedures) of subpart TT.

(xvii) The phrase “(except periods of startup, shutdown, or malfunction)” from §63.1007(e)(1)(ii)(A) (dual mechanical seal system special provisions for pumps) of subpart TT.

(xviii) The phrase “(except periods of startup, shutdown, or malfunction)” from §63.1009(e)(1)(i)(A) (dual mechanical seal system special provisions for agitators) of subpart TT.

(xix) The phrase “(except periods of startup, shutdown, or malfunction)” from §63.1012(b)(1) (compressor seal system standard) of subpart TT.

(xx) The phrase “may be included as part of the startup, shutdown, and malfunction plan, as required by the referencing subpart for the source, or” from §63.1024(f)(4)(i) (leak repair records written procedures) of subpart UU.

(xxi) The phrase “(except periods of startup, shutdown, or malfunction)” from §63.1026(e)(1)(ii)(A) (dual mechanical seal system special provisions for pumps) of subpart UU.

(xxii) The phrase “(except periods of startup, shutdown, or malfunction)” from §63.1028(e)(1)(i)(A) (dual mechanical seal system special provisions for agitators) of subpart UU.

(xxiii) The phrase “(except periods of startup, shutdown, or malfunction)” from §63.1031(b)(1) (compressor seal system standard) of subpart UU.

TABLE 9 TO §63.1103(g)—WHAT ARE MY REQUIREMENTS IF I OWN OR OPERATE A CYANIDE CHEMICALS MANUFACTURING EXISTING OR NEW AFFECTED SOURCE?

If you own or operate . . .	And if . . .	Then you must . . .
* *	* *	* *
(f) A new cyanide chemicals manufacturing process unit that generates process wastewater	(1) The process wastewater is from HCN purification, ammonia purification, or flare blowdown	(i) Achieve a combined removal and control of HAP from wastewater of 93 weight-percent; and (ii) Beginning no later than the compliance dates specified in §63.1102(d), waste management units upstream of an open or closed biological treatment process shall meet the requirements of §63.133 through §63.137 of subpart G of this part, as applicable.
(g) An existing cyanide chemicals manufacturing process unit that generates process wastewater	(1) The process wastewater stream is from HCN purification, ammonia purification, or flare blowdown; and (2) the total annual average concentration of Table 9 of 40 CFR part 63, subpart G compounds (Table 9 compounds) and free cyanide measured according to §63.1103(g)(5)(vi) from each process wastewater stream are greater or equal to 10,000 ppmw at any flow rate, or the total annual average concentration of Table 9 compounds and free cyanide from each process wastewater stream are greater or equal to 1,000 ppmw, and the annual average flow rate is greater or equal to 10 liters per minute, according to the procedures in §63.144(a)	(i) Beginning no later than the compliance dates specified in §63.1102(d), comply with the requirements of §63.138(a)(1). (ii) For compliance options and calculations requiring an Fr value under §63.138(a)(1); owners and operators may use a value of 0.93 for free cyanide.
(h) A cyanide chemicals manufacturing process unit that generates maintenance wastewater	(1) The maintenance wastewater contains hydrogen cyanide or acetonitrile	(i) Comply with the requirements of §63.1106(b).

(i) An item of equipment listed in §63.1106(c)(1) that transports or contains wastewater liquid streams from a cyanide chemicals manufacturing process unit	(1) The item of equipment meets the criteria specified in §63.1106(c)(1) through (3) and either (c)(4)(i) or (ii)	(i) Comply with the requirements in Table 35 of subpart G of this part.
(j) Equipment, as defined under §63.1101	(1) The equipment contains or contacts hydrogen cyanide and operates equal to or greater than 300 hours per year	(i) Comply with either subpart TT or UU of this part, and paragraph (g)(5) of this section, with the exception that open-ended lines that contain or contact hydrogen cyanide are exempt from any requirements to install a cap, plug, blind flange, or second valve to be capped.

6. Section 63.1104 is amended by revising paragraph (c) to read as follows:

§63.1104 Process vents from continuous unit operations: applicability assessment procedures and methods.

* * * * *

(c) *Applicability assessment requirements.* The TOC or organic HAP concentrations, process vent volumetric flow rates, process vent heating values, process vent TOC or organic HAP emission rates, halogenated process vent determinations, process vent TRE index values, and engineering assessments for process vent control applicability assessment requirements are to be determined during maximum representative operating conditions for the process, except as provided in paragraph (d) of this section, or unless the Administrator specifies or approves alternate operating conditions. For acrylic and modacrylic fiber production affected sources, carbon black production affected sources, cyanide chemicals manufacturing affected sources, polycarbonate production affected sources, and ethylene production affected sources, operations during periods of malfunction shall not constitute representative conditions for the purpose of an applicability test. For all other affected sources, operations during periods of

startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of an applicability test.

* * * * *

7. Section 63.1108 is amended by:

a. Revising paragraphs (a) introductory text and paragraph (a)(4)(i).

b. Revising paragraphs (b)(1)(ii), (b)(2) introductory text, and paragraphs (b)(4)(ii)(A) and (B).

The revisions read as follows:

§63.1108 Compliance with standards and operation and maintenance requirements.

(a) *Requirements.* The requirements of paragraphs (a)(1), (2), and (5) of this section apply to all affected sources except acrylic and modacrylic fiber production affected sources and polycarbonate production affected sources, and beginning no later than the compliance dates specified in §63.1102(c) for ethylene production affected sources, specified in §63.1102(d) for cyanide chemicals manufacturing affected sources, and specified in §63.1102(e) for carbon black production affected sources. The requirements of paragraph (a)(4) of this section apply only to acrylic and modacrylic fiber production affected sources, polycarbonate production affected sources and beginning no later than the compliance dates specified in §63.1102(c) for ethylene production affected sources, specified in §63.1102(d) for cyanide chemicals manufacturing affected sources, and specified in §63.1102(e) for carbon black production affected sources. The requirements of paragraphs (a)(3), (6), and (7) of this section apply to all affected sources.

* * * * *

(4) * * *

(i) For acrylic and modacrylic fiber production affected sources and polycarbonate production affected sources, and beginning no later than the compliance dates specified in §63.1102(c) for ethylene production affected sources, specified in §63.1102(d) for cyanide chemicals manufacturing, and specified in §63.1102(e) for carbon black production affected

sources, the emission limitations and established parameter ranges of this part shall apply at all times except during periods of non-operation of the affected source (or specific portion thereof) resulting in cessation of the emissions to which this subpart applies. Equipment leak requirements shall apply at all times except during periods of non-operation of the affected source (or specific portion thereof) in which the lines are drained and depressurized resulting in cessation of the emissions to which the equipment leak requirements apply.

* * * * *

(b) * * *

(1) * * *

(ii) Excused excursions are not allowed for acrylic and modacrylic fiber production affected sources, polycarbonate production affected sources, and beginning no later than the compliance dates specified in §63.1102(c) for ethylene production affected sources, specified in §63.1102(d) for cyanide chemicals manufacturing affected sources, and specified in §63.1102(e) for carbon black production affected sources. For all other affected sources, including ethylene production, cyanide chemicals manufacturing, and carbon black production affected sources, prior to the compliance dates specified in §63.1102(c) through (e), an excused excursion, as described in §63.998(b)(6)(ii), is not a violation.

(2) *Parameter monitoring: Excursions.* An excursion is not a violation in cases where continuous monitoring is required and the excursion does not count toward the number of excused excursions (as described in §63.998(b)(6)(ii)), if the conditions of paragraph (b)(2)(i) or (ii) of this section are met, except that the conditions of paragraph (b)(2)(i) of this section do not apply for acrylic and modacrylic fiber production affected sources, polycarbonate production affected sources, and beginning no later than the compliance dates specified in §63.1102(c) for ethylene production affected sources, specified in §63.1102(d) for cyanide chemicals manufacturing affected sources, and specified in §63.1102(e) for carbon black production affected sources. Nothing in this paragraph shall be construed to allow or excuse a

monitoring parameter excursion caused by any activity that violates other applicable provisions of this subpart or a subpart referenced by this subpart.

* * * *

(4) * *

(ii) * *

(A) The Administrator may determine compliance with emission limitations of this subpart based on, but not limited to, the results of performance tests conducted according to the procedures specified in §63.997, unless otherwise specified in this subpart or a subpart referenced by this subpart. For carbon black production affected sources, beginning no later than the compliance dates specified in §63.1102(e), in addition to initial performance test requirements to demonstrate compliance with process vent requirements, subsequent performance tests are required no later than 60 months after the preceding performance test in accordance with the procedures specified in §63.997(e) for initial performance tests.

(B) For acrylic and modacrylic fiber production affected sources, polycarbonate production affected sources, and beginning no later than the compliance dates specified in §63.1102(c) for ethylene production affected sources, specified in §63.1102(d) for cyanide chemicals manufacturing affected sources, and specified in §63.1102(e) for carbon black production affected sources, performance tests shall be conducted under such conditions as the Administrator specifies to the owner or operator based on representative performance of the affected source for the period being tested. Representative conditions exclude periods of startup and shutdown unless specified by the Administrator or an applicable subpart. The owner or operator may not conduct performance tests during periods of malfunction. The owner or operator must record the process information that is necessary to document operating conditions during the test and include in such record an explanation to support that such conditions represent normal operation. Upon request, the owner or operator shall make available to the

Administrator such records as may be necessary to determine the conditions of performance tests.

* * * * *

8. Section 63.1110 is amended by:

- a. Revising paragraph (a) introductory text.
- b. Revising paragraphs (a)(7), (a)(10)(i) introductory text, (a)(10)(i)(A) through (C), and (a)(10)(ii).
- c. Revising paragraph (d)(2).

The revisions read as follows:

§63.1110 Reporting requirements.

(a) *Required reports.* Each owner or operator of an affected source subject to this subpart shall submit the reports listed in paragraphs (a)(1) through (8) of this section, as applicable. Each owner or operator of an acrylic and modacrylic fiber production affected source or polycarbonate production affected source subject to this subpart shall also submit the reports listed in paragraph (a)(9) of this section in addition to the reports listed in paragraphs (a)(1) through (8) of this section, as applicable. Beginning no later than the compliance dates specified in §63.1102(c) for ethylene production affected sources, specified in §63.1102(d) for cyanide chemicals manufacturing affected sources, and specified in §63.1102(e) for carbon black production affected sources, each owner or operator of an ethylene production affected source, cyanide chemicals manufacturing affected source, and carbon black production affected source subject to this subpart shall also submit the reports listed in paragraph (a)(10) of this section in addition to the reports listed in paragraphs (a)(1) through (8) of this section, as applicable.

* * * * *

(7) Startup, Shutdown, and Malfunction Reports described in §63.1111 (except for acrylic and modacrylic fiber production affected sources, carbon black production affected

sources, cyanide chemicals manufacturing affected sources, ethylene production affected sources, and polycarbonate production affected sources).

* * * * *

(10) * * *

(i) Beginning no later than the compliance dates specified in §63.1102(c) for ethylene production affected sources, specified in §63.1102(d) for cyanide chemicals manufacturing affected sources, and specified in §63.1102(e) for carbon black production affected sources, within 60 days after the date of completing each performance test required by this subpart or applicability assessment required by §63.1103(f)(3)(iv), the owner or operator must submit the results of the performance test or applicability assessment following the procedures specified in paragraphs (a)(10)(i)(A) through (C) of this section.

(A) *Data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT website (<https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert>) at the time of the test.* Submit the results of the performance test or applicability assessment to the EPA via CEDRI, which can be accessed through the EPA's CDX (<https://cdx.epa.gov/>). The data must be submitted in a file format generated through the use of the EPA's ERT. Alternatively, you may submit an electronic file consistent with the extensible markup language (XML) schema listed on the EPA's ERT website.

(B) *Data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT website at the time of the test.* The results of the performance test or applicability assessment must be included as an attachment in the ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website. Submit the ERT generated package or alternative file to the EPA via CEDRI.

(C) *CBI.* Do not use CEDRI to submit information you claim as CBI. Anything submitted to CEDRI cannot later be claimed CBI. Although we do not expect persons to assert a claim of CBI, if an owner or operator wishes to assert a CBI claim for some of the information submitted

under paragraph (a)(10)(i)(A) or (B) of this section, then the owner or operator must submit a complete file, including information claimed to be CBI, to the EPA. The file must be generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website. Submit the file on a compact disc, flash drive, or other commonly used electronic storage medium and clearly mark the medium as CBI. Mail the electronic medium to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same file with the CBI omitted must be submitted to the EPA via EPA's CDX as described in paragraphs (a)(10)(i)(A) and (B) of this section. All CBI claims must be asserted at the time of submission. Furthermore, under CAA section 114(c), emissions data is not entitled to confidential treatment, and the EPA is required to make emissions data available to the public. Thus, emissions data will not be protected as CBI and will be made publicly available.

(ii) Beginning no later than the compliance dates specified in §63.1102(c) through (e), the owner or operator must submit all subsequent Notification of Compliance Status reports required under paragraph (a)(4) of this section in PDF format to the EPA via CEDRI, which can be accessed through EPA's CDX (<https://cdx.epa.gov/>). All subsequent Periodic Reports required under paragraph (a)(5) of this section must be submitted to the EPA via CEDRI using the appropriate electronic report template on the CEDRI website (<https://www.epa.gov/electronic-reporting-air-emissions/compliance-and-emissions-data-reporting-interface-cedri>) for this subpart beginning no later than the compliance dates specified in §63.1102(c) through (e) or once the report template has been available on the CEDRI website for 1 year, whichever date is later. The date report templates become available will be listed on the CEDRI website. The report must be submitted by the deadline specified in this subpart, regardless of the method in which the report is submitted. Although we do not expect persons to assert a claim of CBI, if you wish to assert a CBI claim, then submit a complete report, including information claimed to be CBI, to the EPA. Periodic Reports must be generated using the appropriate template on the

CEDRI website. Submit the file on a compact disc, flash drive, or other commonly used electronic storage medium and clearly mark the medium as CBI. Mail the electronic medium to U.S. EPA/OAQPS/CORE CBI Office, MD C404-02, 4930 Old Page Road, Durham NC 27703 to the attention of the applicable person specified in paragraphs (A) through (C) of this section. The same file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph. All CBI claims must be asserted at the time of submission. Furthermore, under CAA section 114(c), emissions data is not entitled to confidential treatment, and the EPA is required to make emissions data available to the public. Thus, emissions data will not be protected as CBI and will be made publicly available.

(A) Ethylene Production Sector Lead

(B) Cyanide Chemicals Manufacturing Sector Lead

(C) Carbon Black Production Sector Lead

* * * * *

(d) * * *

(2) *Due date.* The owner or operator shall submit the Notification of Compliance Status for each affected source 240 days after the compliance date specified for the affected source under this subpart, or 60 days after completion of the initial performance test or initial compliance assessment/subsequent required performance test or subsequent compliance assessment, whichever is earlier. Notification of Compliance Status reports may be combined for multiple affected sources as long as the due date requirements for all sources covered in the combined report are met.

* * * * *

9. Section 63.1111 is amended by revising paragraphs (a) introductory text, (b) introductory text, and (c) introductory text to read as follows:

§63.1111 Startup, shutdown, and malfunction.

(a) *Startup, shutdown, and malfunction plan.* Before **[INSERT DATE 180 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, the requirements of this paragraph (a) apply to all affected sources except for acrylic and modacrylic fiber production affected sources and polycarbonate production affected sources. On and after **[INSERT DATE 180 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, the requirements of this paragraph (a) apply to all affected sources except for acrylic and modacrylic fiber production affected sources, carbon black production affected sources, cyanide chemicals manufacturing affected sources, and polycarbonate production affected sources. On and after July 6, 2023, the requirements of this paragraph (a) apply to all affected sources except for acrylic and modacrylic fiber production affected sources, carbon black production affected sources, cyanide chemicals manufacturing affected sources, ethylene production affected sources, and polycarbonate production affected sources.

* * * * *

(b) *Startup, shutdown, and malfunction reporting requirements.* Before **[INSERT DATE 180 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, the requirements of this paragraph (b) apply to all affected sources except for acrylic and modacrylic fiber production affected sources and polycarbonate production affected sources. On and after **[INSERT DATE 180 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, the requirements of this paragraph (b) apply to all affected sources except for acrylic and modacrylic fiber production affected sources, carbon black production affected sources, cyanide chemicals manufacturing affected sources, and polycarbonate production affected sources. On and after July 6, 2023, the requirements of this paragraph (b) apply to all affected sources except for acrylic and modacrylic fiber production affected sources, carbon black production affected sources, cyanide chemicals manufacturing affected sources, ethylene production affected sources, and polycarbonate production affected sources.

* * * * *

(c) *Malfunction recordkeeping and reporting.* Before **[INSERT DATE 180 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, the requirements of this paragraph (c) apply only to acrylic and modacrylic fiber production affected sources and polycarbonate production affected sources. On and after **[INSERT DATE 180 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, the requirements of this paragraph (c) apply only to acrylic and modacrylic fiber production affected sources, carbon black production affected sources, cyanide chemicals manufacturing affected sources, and polycarbonate production affected sources. On and after July 6, 2023, the requirements of this paragraph (c) apply only to acrylic and modacrylic fiber production affected sources, carbon black production affected sources, cyanide chemicals manufacturing affected sources, ethylene production affected sources, and polycarbonate production affected sources.

* * * * *